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THE

MATERNAL MANAGEMENT

OF

CHILDREN.

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THE

MATERNAL MANAGEMENT

OF

CHILDREN,

IN

HEALTH AND DISEASE.

BY

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"HINTS TO MOTHERS" FOR THE MANAGEMENT OF THEIR HEALTH DURING PREGNANCY AND IN THE LYING-IN-ROOM.

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PREFACE

TO

THE SECOND EDITION.

THIS book has been written for the young and inexperienced mother. It is intended to furnish her with that information which the observation of some years convinces the author, young mothers, almost without any exception, do not possess; and yet, from ignorance of which — unavoidable indeed — the constitution of many an infant has received irretrievable injury, and life itself but too frequently fallen a sacrifice.

Presuming that the principles and directions laid down in this book are sound, it is believed that the young parent taking it as her guide, will avoid the evils referred to, and save herself much mental misery.

Some of the subjects introduced are necessarily touched upon in the writer's "Hints to Mothers;" there they have, however, been only briefly alluded to; to this work their more full exposition properly belongs.

In the present edition it has been thought advisable to alter the arrangement of the contents; to divide them into two parts. The first directs the mother how to manage the child in health; the second, in sickness. The whole work has been carefully revised; a considerable portion entirely re-written; and several new sections added.

T. B.

Finsbury Place,
January, 1845.

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THE MATERNAL

MANAGEMENT OF CHILDREN

IN

HEALTH AND DISEASE.

PART I.

MATERNAL MANAGEMENT OF THE CHILD IN HEALTH.

THIS part will be devoted to directions for promoting and maintaining the health of the child. The information it contains will embrace two periods of the child's life—infancy and childhood. The line of demarcation made between these two epochs has always been arbitrary. I would draw the line at a period of time which appears to me to be most natural, the most simple, and least likely to lead the reader into the error of misapplying the information given. We will consider, then, that *Infancy*, commencing with birth, extends to about

the end of the second year, when the first dentition is completed: *Childhood* extends from about the second to the seventh or eighth year, when the second dentition is commenced.

CHAPTER I.

DIET OF THE INFANT AND CHILD.

SECT. I. — MATERNAL NURSING.

In the early months of infancy the organs of digestion are unsuited to any other food than that derived from the breast of the mother. So little capable are they, indeed, of digesting any other, even of the blandest and most digestible kind, that probably not more than one infant in six or seven ever arrives at the more advanced period of life when deprived of the kind of nourishment nature intended for them. It is essential, however, for maternal suckling to be successful, that the parent be a healthy woman, that she be careful to maintain her health, and that she adopt and carefully follow out certain rules for her guidance in the performance of the office itself. On the other hand, much injury has often arisen to parent and

offspring from the former taking upon her the office of nursing when her constitution totally unfitted her for it. For whilst no period of a woman's life is, generally speaking, so healthy as this, it must not be forgotten that to all general rules there are exceptions, and that when the exception exists in this case, and is disregarded, the result is generally fatal to the offspring, sometimes to the mother also.

RULES FOR NURSING THE INFANT.—From the first moment the infant is applied to the breast it must be nursed upon a certain plan: this is essential to the well-doing of the child. One of the most fruitful sources of disease in the early days of infantile life is improper management in relation to diet; and a large portion of the suffering and mortality which occurs during this period arises from this cause alone. Such regularity, too, will much contribute to the preservation of the parent's health; and, whilst it thus renders her a better nurse, will cause the duty of nursing to be a source of increased pleasure.

The plan to be followed until the first teeth appear.— After the infant is washed and dressed, it is to be put quietly to sleep, and, having been allowed to repose for some hours, it is to be put to the mother's breast. From this source alone, in some cases, its wants from the very first hour of

its life will derive a sufficient supply; but in the majority of instances, particularly in first confinements, this will not be the case until two or three days after delivery. When this deficiency exists, it must be supplied by an artificial diet, as like the breast-milk as can be found. This is obtained by taking two-thirds of fresh cow's milk with one-third of boiling water, slightly sweetening with loaf-sugar. A few spoonfuls of this are to be given through the sucking-bottle, and not from the boat or spoon; and this caution, in reference to the quantity and mode of giving this food, it is particularly necessary to attend to, since, if the quantity given is not very small, and the mode of giving it very slow, the digestive function will become deranged, and acidity, flatulence, and even colic, may supervene.

The breast-milk being fully established, and furnished in sufficient quantity, the artificial food is to be put aside, and the infant, from this time, must obtain its nourishment from the breast alone. For a week or ten days, the appetite of the infant must be the mother's guide as to the frequency in offering the breast. The stomach at birth is feeble, and as yet unaccustomed to food; its wants, therefore, are easily satisfied, but they are frequently renewed. An interval, however, sufficient for digesting the little swallowed is obtained before the appetite again

revives, and a fresh supply is demanded. The week or ten days having expired, the infant is to be nursed at stated periods, at regular intervals of every four hours. This allows sufficient time for each meal to be digested, and the stomach to regain the tone necessary for the digestion of the next, and, moreover, tends very essentially to promote the due and healthy action of the bowels. Such regularity, too, will do much to obviate fretfulness, and to prevent that constant pining and crying for the breast which irregular and frequent nursing, after a time, invariably produces. This evil, indeed, generally grows out of irregular nursing. The young mother, considering every expression of uneasiness as an indication of appetite, runs into the very serious error of offering the breast at all times and seasons, so that frequently the child has not left the breast ten minutes before it is again put there. From this injurious and dangerous practice, the stomach of the infant becomes overloaded, the food remains undigested, the bowels are always disordered, fever is excited, and, by-and-by, the symptoms become aggravated, the infant seriously ill, and is, perhaps, eventually lost; when, by simply observing from the first the rules of nursing laid down, it might have continued healthy, and grown into a vigorous child. These cases of indigestion in the infant,

caused by irregular and too frequent nursing, are continually occurring, and as frequently medicine is given without permanent relief, because the cause of the mischief is not avoided—it is overlooked. Fortunately, in most cases, the mother, tired of a fruitless repetition of medicine, seeks further aid; when, by simply adopting the rules of nursing now laid down, the child's symptoms are removed, healthy digestion restored, and no relapse occurs; this happy issue being, perhaps, obtained without the exhibition of further medicine at all.

This plan is to be pursued night and day, and the mother will be surprised to find with what regularity her little one will awaken as the hour for its meal approaches. After a little while, however, it is advisable to alter the periods of night-nursing, or rather to do away with night-nursing altogether; that is, to suckle the infant as late as ten o'clock P. M., and not put the child to the breast again until five o'clock the next morning. I am constantly in the habit of advising this measure, and I have always found it, when adopted, of great advantage to the mother's health, and never attended by the slightest injury to the child. With the latter it soon becomes a habit; to induce it, however, it must be taught early.

This course, then, is to be followed until the

appearance of the first teeth (about the sixth or seventh month); and if the parent be a healthy woman, the quantity of milk supplied by the breast will generally be found sufficient to afford adequate nourishment to the child, without additional assistance from artificial food. The latter is on no account to be given (up to this period), unless from deficiency of milk, or some other cause, it be positively required.

This plan of night-nursing cannot, however, be adopted at so *early a period* with all children. Where there is much delicacy and a feeble constitution, it will be necessary sometimes to postpone it a little longer. This very delicacy, however, whilst it demands a more frequent supply, calls for the greatest care in affording it, lest it be too frequent and too great in quantity. And be it remembered by the reader, that this is only an occasional exception to a most important principle, the adoption of which should never be delayed except from paramount necessity.

The parent may be a healthy woman, and yet the quantity of breast-milk, long before the appearance of the first teeth, as has just been observed, may not be sufficient for the demands of the child. Whenever this is the case the deficiency must be made up by the mixture of cow's milk and water, and of this alone, if it agree with the child. It must be given, too,

through the sucking-bottle until the teeth appear; after which time an alteration in the kind of food, and the mode of exhibiting it, similar to that proposed below, may be adopted.

The plan to be followed after the first teeth have appeared. — When the mother, at this period, has still a large and abundant supply of good and nourishing milk, and the child is healthy and evidently flourishing upon it, I would not recommend any immediate change. The parent may, with benefit to her own health, as well as with advantage to the child, pursue the same plan as heretofore for a few weeks longer. In general, however, the mother will require some little aid at this time, and artificial food may now be given, twice in the course of the day, without risk or injury to the child. Good fresh cow's milk, with the addition of water or not, as it is found to agree best; Hard's farinaceous food; Leman's tops-and-bottoms; sago or arrow-root; or, if these disagree with the stomach, weak beef-tea, veal-tea, or mutton-tea, clear and free from fat, and mixed with an equal quantity of farinaceous food and a few grains of salt,— any one of these which the parent finds to agree best may be given with benefit.

As this is the first time that artificial food has been particularly referred to, it is right to observe, as a general remark applicable to its use at all

times, that the greatest care must ever be taken in the selection of it, in its preparation, in the quantity given, and in the mode of giving it. In *the choice* of the food, the mother must be guided by circumstances: she must find out that which suits best; and so long as the child flourishes, she should from no trivial cause change it. The different kinds just pointed out may be tried in the order given till one is found to agree. The *mode of making* these preparations is detailed at length at page 50.: this has been done because the defective manner in which artificial food is prepared is not unfrequently the sole cause of its failure. It is only necessary further to observe upon this point, that the extreme cleanliness of the vessels in which it is made, and the most perfect sweetness of the vessel in which it is given to the child, is imperatively essential to its success. *The quantity given* must be small, lest the stomach be overloaded, which seldom fails, after a little while, to impair its tone, and gives rise to the distressing dyspeptic symptoms before alluded to. In reference to *the mode of giving it*, the child must be fed slowly; and, minding this precaution, the sucking-bottle may now be discontinued, and the spoon used in its stead: but more full instructions upon all the foregoing points will be found in the chapter on "Artificial Feeding."

In about six weeks or two months after the artificial food has been in part commenced it may be given, if necessary, more frequently—three or four times in the twenty-four hours, and the breast of course less frequently. This will prepare the infant for weaning, which, under these circumstances, when the time arrives, will be easily accomplished.

Such is the plan of nursing to be followed by the mother until the infant is weaned entirely from the breast. The period when this ought to take place, as also the manner of accomplishing it, are detailed in the section on "Weaning."

RULES FOR THE HEALTH OF THE NURSING-MOTHER.—A careful attention to health on the part of the mother is especially called for during nursing. Healthy, nourishing, and digestible milk can be procured only from a healthy and well-constituted parent; and it is against common sense to expect that if a mother impairs her health and digestion by improper diet, neglect of exercise, and impure air, she can nevertheless provide as wholesome and uncontaminated a fluid for her child as if she were diligently attentive to these important points. Every instance of indisposition in the nurse is liable to affect the infant.

A nursing-mother who has always enjoyed a state of good health must adhere strictly to the

same kind of diet to which she has been accustomed, and by which her health was maintained prior to her confinement; and if, as will most likely be the case, she find her appetite increase, the extra demand must be met by an increase in that kind of food which is wholesome, nourishing, and simple in quality, and not in that which is rich and pampering to the appetite. The use of stimuli by a parent of robust and sound health is not required, and such an individual will find it better for her own health, as well as for that of her child, to adopt a barley-milk beverage. It is a very prevalent and most mischievous error to suppose that because a woman is nursing, therefore she ought to live fully, and to add an allowance of wine, porter, or other fermented liquor, to her usual diet. The only result of this plan is to cause an unnatural degree of fulness in the system, which places the nurse on the brink of disease, and which of itself frequently puts a stop to, instead of increasing, the secretion of milk. This practice of porter-drinking, &c. generally commences in the lying-in-room. The young mother is there told that it is essential to the production of a good and plentiful supply of breast-milk; and from a sense of duty this course is adopted, however disagreeable, as it generally is to many who submit to it. Now I am desirous that young mothers should understand that this advice, however well meant, is not

good advice — nay more, that, when followed, it is frequently productive of mischief.

Exercise and fresh air are essential to the production of healthy milk, as they also contribute to increase the quantity secreted. No one can have seen much of practice in this metropolis, and not have been fully convinced of this fact. Wet or fine, if the mother be but in good health, if she live in a large city, she should take the daily walk.

I need scarcely remind the nursing-parent of the importance of attending to the state of her skin; of the invigorating effects of the bath; to the proper regulation of the bowels; to the avoidance of all mental excitement, which frequently exercises a very prejudicial effect on the quality of the breast-milk; to the injurious influence of an indulgence in late hours, night and morning. These and many other points of observance connected with the health, it is unnecessary further to dwell upon or allude to here. The right plan of proceeding is plain enough; only pay attention to the ordinary laws of health, and the mother, if she have a sound and robust constitution, will make a good nurse; she will have milk sufficient in quantity, and wholesome and nourishing in quality, so long as her infant requires this kind of nutriment.

Many women, however, are healthy, but have not a robust constitution. So long, however, as they possess a frame free from disease, they may nurse with great advantage to their own health, and without detriment to that of the child. It behoves such persons, however, assiduously to employ every means likely to invigorate their health, the more especially as such care will tend to prevent that deficiency in the quantity of milk taking place which is very apt to occur sooner or later. I would recommend in these cases a plain, generous, nutritious regimen, — not of one description of food exclusively, but, as is natural, a wholesome, mixed animal and vegetable diet. A trial, too, may be made here of beer or wine, according to former habit. A pint of good sound ale or porter in the four-and-twenty hours will, in some, be found to have a favourable effect upon the health: when this is the case, let it be continued; on the other hand, if it produce discomfort and disturbance of the system, at once discontinue it. I find, however, more good to arise out of exercise and the bath than from any stimuli. Regular daily exercise in the open air is of great importance, having an extraordinary influence in promoting the secretion of healthy milk, — as also has the tepid or cold salt-water shower-bath, taken every morning, immediately

upon rising. If the latter cannot be borne, sponging the body with tepid or cold salt-water must be substituted. By following with perseverance the foregoing hints, a breast of milk will be obtained, as ample in quantity, and good in quality, as the constitution of the parent can produce. By-and-by the supply may somewhat fall off, and that before the first teeth of the child appear; in which case the deficiency must be made up by artificial food, of a kind suited to the age of the child, and given through the bottle.

A deficiency of milk will, in some mothers, exist from the earliest weeks after delivery. If this is not quickly remedied by the means just pointed out, a wet-nurse must be obtained. It will be of no avail partially to nurse and partially to feed the infant at this period, and under such circumstances; for if it is not soon lost, it will only live a few months, or a year at most, and be an object of the greatest anxiety and grief to its parent. The constitution of the mother in this case is generally unhealthy, and the condition into which the child is brought arises from the unwholesomeness of her milk.

Women who marry comparatively late in life, and bear children, generally have a deficiency of milk after the third or fourth month: artificial feeding must in part be here resorted to.

In some women *the monthly periods* return be-

fore they cease to nurse. If this take place early after delivery, it will in most cases so alter the good qualities of the milk as seriously to affect the health of the child, and oblige the mother to transfer her little one to a wet-nurse. But when it does not occur until the sixth or seventh month, I have seldom found much inconvenience to arise therefrom. As a general rule, the breast should be withheld from the child as much as possible during its continuance, and artificial food substituted. As I have elsewhere observed, this is a substantial objection in the selection of a wet-nurse, whenever found to exist.

I may just mention that many mothers give themselves unnecessary fatigue in suckling from the awkward manner in which they hold the child. Until the child is old enough to sit while it is suckling, or the mother accustomed to raise the child cleverly in her arms to the breast, it is best for her to lie down when the infant has occasion to suck. At all times, if in bed, the child should take the breast as it lies, and not incommode the mother by obliging her to sit up in bed. When up and nursing, the mother should sit upright and raise the child to her breast, and not bend forward to suckle the infant on her lap. This greatly tires and fatigues the mother, and causes severe pain in her back, without in any degree relieving the child.

Again, a parent should avoid giving one breast more frequently than the other: the infant should be applied to each in its turn. This it is necessary to observe, that the secretion of milk may be equally promoted in each breast, and also lest the child should contract the habit of squinting, of which there is danger if suckled upon one breast only, from having its eyes constantly directed to one side.

THE INJURIOUS EFFECTS TO THE MOTHER AND INFANT OF UNDUE AND PROTRACTED SUCKLING.—The period of suckling is generally one of the most healthy of a woman's life. But there are exceptions to this as a general rule; and nursing, instead of being accompanied by health, may be the cause of its being materially, and even fatally, impaired. This may arise out of one of two causes: either, a parent continuing to suckle too long,—or, from the original powers or strength not being equal to the continued drain on the system.

Examples of the first class I am meeting with daily. I refer to poor married women, who, having nursed their infants eighteen months, two years, or even longer than this, from the belief that by so doing they will prevent pregnancy, call to consult me with an exhausted frame and disordered general health, arising solely from pro-

tracted nursing, pursued from the above mistaken notion.

I most frequently meet with examples of the second class in the delicate woman, who, having had two or three children in quick succession, her health has given way, so that she has all the symptoms arising from undue suckling, when perhaps the infant at her breast is not more than two or three months old.

Since the health of the mother, then, will suffer materially from this circumstance, she ought not to be ignorant of the fact; so that, when the first symptoms manifest themselves, she may be able to recognise their insidious approach; and, tracing them to their real cause, obtain medical advice before her health be seriously impaired.

Symptoms. — The earliest symptom is a dragging sensation in the back when the child is in the act of sucking, and an exhausted feeling of sinking and emptiness at the pit of the stomach afterwards. This is soon followed by loss of appetite, costive bowels, and pain on the left side; then the head will be more or less affected, sometimes with much throbbing, singing in the ears, and always some degree of giddiness, with great depression of spirits.

Soon the chest becomes affected, and the

breathing is short, accompanied by a dry cough and palpitation of the heart upon the slightest exertion. As the disease advances, the countenance becomes very pale, and the flesh wastes, and profuse night perspirations, great debility, swelling of the ankles, and nervousness ensue. It is unnecessary, however, to enter into a more full detail of symptoms.

Treatment. — All that it will be useful to say in reference to treatment, is this; that, although much may be done in the first instance by medicine, change of air, cold and sea bathing, yet the quickest and most effectual remedy is to wean the child, and thus remove the cause.

There is another and equally powerful reason why the child should be weaned, or rather have a young and healthy wet-nurse, if practicable. *The effects upon the infant,* suckled under such circumstances, will be most serious. Born in perfect health, it will now begin to fall off in its appearance, for the mother's milk will be no longer competent to afford it due nourishment; it will be inadequate in quantity and quality. Its countenance, therefore, will become pale; its look sickly and aged; the flesh soft and flabby; the limbs emaciated; the belly, in some cases, large, in others, shrunk; and the evacuations fetid and unnatural; and in a very few

weeks, the blooming healthy child will be changed into the pale, sickly, peevish, wasted creature, whose life appears hardly desirable.

The only measure that can save the life, and recover an infant from this state, is that which would previously have prevented it — a healthy wet-nurse.

If the effects upon the infant should not be so aggravated as those just described, and it subsequently live and thrive, there will be a tendency in such a constitution to scrofula and consumption, to manifest itself at some future period of life, undoubtedly acquired from the parent, and dependent upon the impaired state of her health at the time of its suckling. A wet-nurse early resorted to will prevent this.

It will be naturally asked, for how long a period a mother ought to perform the office of a nurse? No specific time can be mentioned, and the only way in which the question can be met is this: no woman, with advantage to her own health, can suckle her infant beyond twelve or eighteen months; and at various periods between the third and twelfth month, many women will be obliged partially or entirely to resign the office. This has elsewhere been referred to (p. 35.).

The monthly periods generally reappear from the twelfth to the fourteenth month from delivery;

and when established, as the milk is found invariably to diminish in quantity, and also to deteriorate in quality, and the child is but imperfectly nourished, it is positively necessary in such instances at once to wean it.

MOTHERS WHO OUGHT NEVER TO SUCKLE. — There are some females who ought never to undertake the office of suckling, both on account of their own health, and also that of their offspring.

The woman of a consumptive and strumous constitution ought not. — In the infant born of such a parent there will be a constitutional predisposition to the same disease; and, if it is nourished from her system, this hereditary predisposition will be confirmed. Dr. Combe, in his valuable work on the Principles of Physiology applied to the Preservation of Health, remarks,— "No fact in medicine is better established than that which proves the hereditary transmission from parents to children of a constitutional liability to pulmonary disease, and especially to consumption; yet no condition is less attended to in forming matrimonial engagements. The children of scrofulous and consumptive parents are generally precocious, and their minds being early matured, they engage early in the business of life, and

often enter the married state before their bodily frame has had time to consolidate. For a few years every thing seems to go on prosperously, and a numerous family gathers around them. All at once, however, even while youth remains, their physical powers begin to give way, and they drop prematurely into the grave, exhausted by consumption, and leaving children behind them, destined, in all probability, either to be cut off as they approach maturity, or to run through the same delusive but fatal career as that of the parents from whom they derived their existence." There is scarcely an individual who reads these facts, to whom memory will not furnish some sad and mournful example of their truth; though they perhaps may have hitherto been in ignorance of the exciting cause.

It is, however, with the mother as a nurse that I have now to do, and I would earnestly advise every one of a consumptive or strumous habit (and if there is any doubt upon this point, the opinion of the medical adviser will at once decide it) never to suckle her offspring; her constitution renders her unfit for the task. And, however painful it may be to her mind at every confinement to debar herself this delightful duty, she must recollect that it will be far better for her own health, and infinitely more so for that of the

child, that she should not even attempt it; that her own health would be injured, and her infant's, sooner or later, destroyed by it.

The infant of a consumptive parent, however, must not be brought up by hand. It must have a young, healthy, and vigorous wet-nurse; and in selecting a woman for this important duty very great care must be observed.* The child should be nursed until it is twelve or fifteen months old. In some cases it will be right to continue it until the first set of teeth have appeared, when it will be desirable that a fresh wet-nurse should be obtained for the last six months, and one that has been confined about six weeks or two months will be most suitable. If the child is partially fed during the latter months (from necessity or any other cause), the food should be of the lightest quality, and constitute but a small proportion of its nutriment.

But not only must the nourishment of such a child be regarded, but the *air* it breathes, and the *exercise* that is given to it: as also, the careful removal of all functional derangements as they occur, by a timely application to the medical attendant, and maintaining, especially, a healthy condition of the digestive organs. All these points must be strictly followed out, if any good is to be effected.

* See "Choice of a Wet-nurse," p. 26.

By a rigid attention to these measures the mother adopts the surest antidote, indirectly, to overcome the constitutional predisposition to that disease, the seeds of which, if not inherited from the parent, are but too frequently developed in the infant during the period of nursing; and, at the same time, she takes the best means to engender a sound and healthy constitution in her child. This, surely, is worth any sacrifice.

If the infant derives the disposition to a strumous constitution entirely from the father, and the mother's health be unexceptionable, then I would strongly advise her to suckle her own child.

The mother of a highly susceptible nervous temperament ought not to nurse. — There are other women who ought never to become nurses. The mother of a highly nervous temperament, who is alarmed at any accidental change she may happen to notice in her infant's countenance, — who is excited and agitated by the ordinary occurrences of the day; — such a parent will do her offspring more harm than good by attempting to suckle it. Her milk will be totally unfit for its nourishment: at one time it will be deficient in quantity, — at another, so depraved in its quality, that serious disturbance to the infant's health will ensue. The young and inexperienced mother, who is a parent

for the first time, and altogether ignorant of the duties of her office, and at the same time most anxious to fulfil them faithfully, is but too frequently an instance in point; although at a future period she will generally make a good nurse. The following is an illustration: —

In December, 1838, I attended a young married lady in her first confinement, and in excellent health. She gave birth to a fine, plump, healthy boy. Every thing went on well for three weeks, the mother having an abundant supply of milk, and the infant evidently thriving upon it. About this time, however, the child had frequent fits of crying; the bowels became obstinately costive; — the motions being lumpy, of a mixed colour, quite dry, and passed with great pain. It became rapidly thin, and after awhile its flesh so wasted, and became so flabby, that it might be said literally to hang on the bones. The fits of crying now increased in frequency and violence, coming on every time after the little one left the breast, when it would commence screaming violently, beat the air with its hands and feet, and nothing that was done could appease it. Having lasted for half an hour or more, it would fall asleep quite exhausted; the fit recurring again, when again it had been to the breast. It was very evident that the infant's hunger was not satisfied, as it was also but too

evident its body was not nourished by the parent's milk, which, although abundant in quantity (the breast being large and full of milk), was at this time seriously deteriorated in its nutritive quality. This was caused, I believe, from great anxiety of mind. Her nurse became suddenly deranged, and the whole responsibility and care of the child thus devolved upon the mother, of the duties connected with which she was entirely ignorant. A wet-nurse was obtained. In a very few hours after this change was effected, the screaming ceased, — the child had quiet and refreshing sleep, — and in twelve hours a healthy motion was passed. The child gained flesh almost as quickly as it had previously lost it, and is now as fine and healthy an infant as it promised to be when born.

Whenever there has existed previously any nervous or mental affection in the parent, wet-nurse suckling is always advisable; this, with judicious management of childhood, will do much to counteract the hereditary predisposition.

The mother who only nurses her infant when it suits her convenience ought not. — The mother who cannot make up her mind exclusively to devote herself to the duties of a nurse, and give up all engagements that would interfere with her health, and so with the formation of healthy milk, and with the regular and stated periods of nursing her infant, ought never to suckle. It is unnecessary

to say why; but it is right, for the child's sake, to add, that if it does not sicken, pine, and die, *disease will be generated in its constitution*, to manifest itself at some future period.

The child, then, under all the foregoing circumstances, must be provided with its support from another source, and a wet-nurse is the best.

SECT. II. — WET-NURSE SUCKLING.

CHOICE OF A WET-NURSE. — Ill health and many other circumstances may prevent a parent from suckling her child, and render a wet-nurse necessary. Now, although she will do wisely to leave the choice of one to her medical attendant, still, as some difficulty may attend this, and as most certainly the mother herself ought to be acquainted with the principal points to which his attention is directed in the selection of a good nurse, it will be well to point out in what they consist.

The first thing to which a medical man looks, is the general health of the woman: next, the condition of her breast, — the quality of her milk — its age and her own; whether she is ever unwell while nursing; and, last of all, the condition and health of the child.

Is the woman in good health? — Her general

appearance ought to bear the marks of a sound constitution, and ought to be free from all suspicion of a strumous character; her tongue clean, and digestion good; her teeth and gums sound and perfect; her skin free from eruption, and her breath sweet.

What is the condition of the breast? — A good breast should be firm and well-formed; its size not dependent upon a large quantity of fat, which will generally take away from its firmness, giving it a flabby appearance, but upon its glandular structure, which conveys to the touch a knotted, irregular, and hard feel; and the nipple must be perfect, of moderate size, but well developed.

What is the quality of the milk? — It should be thin, and of a bluish-white colour; sweet to the taste; and when allowed to stand, should throw up a considerable quantity of cream.

What is its age? — If the lying-in month of the patient has scarcely expired, the wet-nurse to be hired ought certainly not to have reached her second month. At this time, the nearer the birth of the child, and the delivery of its foster-parent, the better: the reason for which is, that during the first few weeks the milk is thinner and more watery than it afterwards becomes. If, consequently, a new-born infant be provided with a nurse, who has been delivered three or four months, the natural relation between its stomach and the

quality of the milk is destroyed, and the infant suffers from the oppression of food too heavy for its digestive power.

On the other hand, if you are seeking a wet-nurse for an infant of four or five months old, it would be very prejudicial to transfer the child to a woman recently delivered; the milk would be too watery for its support, and its health in consequence would give way.

The nurse herself should not be too old!—A vigorous young woman from twenty-one to thirty admits of no question. And the woman who has had one or two children before is always to be preferred, as she will be likely to have more milk, and may also be supposed to have acquired some experience in the management of infants.

Inquire whether she is ever unwell while nursing? —If so, reject her at once. You will have no difficulty in ascertaining this point; for this class of persons have an idea that their milk is *renewed,* as they term it, by this circumstance, monthly; and, therefore, that it is a recommendation, rendering their milk fitter for younger children than it would otherwise have been. It produces, however, quite a contrary effect; it much impairs the milk, which will be found to disagree with the child, rendering it at first fretful, — after a time being vomited up, and productive of frequent watery dark green motions.

Last of all, *what is the condition of the child?*— It ought to have the sprightly appearance of health, to bear the marks of being well nourished, its flesh firm, its skin clean and free from eruptions. It should be examined in this respect, particularly about the head, neck, and gums.

If a medical man finds that both mother and child answer to the above description, he has no hesitation in recommending the former as likely to prove a good wet-nurse.

The principal points which the parent must investigate for herself (independent of the medical attendant's inquiries) have reference to *the moral qualifications* of the applicant; and if there is found to be any defect here, however healthy or otherwise desirable, the woman ought at once to be rejected. Temperance, cleanliness, a character for good conduct, fondness for children, and aptness in their management, are among the most important requisites. An amiable disposition and cheerful temper are also very desirable. A violent fit of passion is capable of exerting a most pernicious influence upon the breast-milk, and so altering its healthy qualities that a child has been frequently known to be attacked with a fit of convulsions after being suckled by a nurse while labouring under the effects of a fit of anger: the depressing passions as frequently drive the milk away altogether. It is hence of no small moment

that a wet-nurse be of a quiet and even temper, and not disposed to mental disturbance. The following instance, in confirmation of the latter statement, fell under my notice very lately: —

On the afternoon of Christmas Day, 1840, a gentleman called for me in great haste and distress of mind, having left his child (an infant of between two and three months) in an attack of convulsions, so severe as to threaten a fatal termination. This child I had seen at the same hour the day before sucking at the breast of its wet-nurse in perfect health, never having had a moment's illness. It appeared that the little patient had shown the first symptoms of indisposition the previous night after the nurse had retired to rest; when having been at the breast, it became restless, crying frequently, evidently from pain. In the course of the night the bowels were violently purged; towards morning the stomach would not retain the milk; and as the day advanced the general symptoms of uneasiness increased, and in the afternoon the convulsions above referred to came on. Upon inquiry I found that the father of the young nurse had called on the previous evening; and not only violently abused his daughter, using severe and unwarrantable language, but had struck the poor girl, he being under the influence of liquor at the time. This interview produced such mental distress in the young woman as to attract

the attention of her mistress, when an explanation of the cause ensued. Strict orders were given to forbid the man the house in future: but the mischief was done; for it was but too evident that the alarming state in which I found the child had been produced by the deleterious change which had taken place in the nurse's milk. Remedial measures were used; the breast-milk withheld; and the infant, although it continued for many days in a doubtful state, eventually recovered; the young woman's milk, however, was altogether driven away, and another wet-nurse was, without delay, obliged to be obtained.

It is unnecessary to allude to other qualities which a woman who is sought as a wet-nurse should possess; they will naturally suggest themselves to any thoughtful mind.

DIET AND REGIMEN OF A WET-NURSE. — The regimen of a wet-nurse should not differ much from that to which she has been accustomed: and any change which it may be necessary to make in it should be gradual. It is erroneous to suppose that these women, when nursing, require to be much more highly fed than at other times: a good nurse does not need this, and a bad one will not be the better for it. The quantity which many nurses eat and drink, and the indolent life which they too often are allowed to lead, have the

effect of deranging their digestive organs, and frequently induce a state of febrile excitement, which always diminishes, and even sometimes altogether disperses the milk.

It is always necessary, then, for the mother to prevent the wet-nurse overloading her stomach with a mass of indigestible food and drink. She should live as much as possible in the manner to which she has been accustomed; she should have a wholesome mixed animal and vegetable diet, and a moderate quantity of malt liquor, *provided* it be found necessary.

As I have before said, a very prevailing notion exists that porter tends to produce a great flow of milk. In consequence of this prejudice, the wet-nurse is often allowed as much as she likes: a large quantity is in this way taken, and after a short time so much febrile action excited in the system, that instead of increasing the flow of milk, it diminishes it greatly. Sometimes, without diminishing the quantity, it imperceptibly but seriously deteriorates its quality. For instance:—

In May of the present year a wet-nurse became necessary for an infant of two months old, the child of a lady that I attended in her confinement. A young woman was obtained, healthy and robust. At first the nurse's milk seemed to suit the child, and every thing went on well for three weeks. At this time I was sent for, the infant having had

diarrhœa for three or four days, with green motions and occasional vomiting. I looked for the cause, and, amongst other inquiries, to the health of the nurse. I was told that she was in perfect health; but perceiving that she looked ruddier and more full in the face than heretofore, I inquired about the quantity of beverage allowed, and found it exceeded two pints of porter daily. I then prescribed — for the infant, no medicine; for the nurse, one pint of porter only. As the patient lived some little distance from town I did not see the child for three days: it was then somewhat better, but still not well. I directed the malt liquor to be discontinued altogether, and the nurse to have the shower-bath every morning and plenty of out-door exercise. In three days more the infant was perfectly well, and the nurse had still an ample supply of milk, which now agreed with and nourished the child.

As *a general rule*, I believe porter, wine, or any stimulant quite as unnecessary for the wet-nurse as for the nursing mother, if she be in sound and vigorous health. That there are cases benefited by its daily moderate use, I have no doubt: but these are the exceptions. I am every day more and more convinced of the truth of this statement; and that it will be found practically true.

It may be well here to remark, that in London I frequently meet with severe cases of diarrhœa

in infants at the breast, fairly traceable to bad porter, which vitiating the quality of the milk, no medical treatment cures the disease until this beverage is left off or changed, when it at once disappears. The following is a case in point: —

On the 25th May, 1836, I was called to see an infant at the breast with diarrhœa. The remedial measures had but little effect so long as the infant was allowed the breast-milk; but this being discontinued, and arrow-root made with water only allowed, the complaint was quickly put a stop to. Believing that the mother's milk was impaired from some accidental cause which might now be past, the infant was again allowed the breast; in less than four-and-twenty hours, however, the diarrhœa returned. The mother being a very healthy woman, it was suspected that some unwholesome article in her diet might be the cause; her regimen was accordingly carefully inquired into, when it appeared that porter from a neighbouring publican's had been substituted for their own for some little time past. This proved to be bad, throwing down, when left to stand a few hours, a considerable sediment; it was discontinued; good sound ale taken instead; the infant again put to the breast, — upon the milk of which it flourished, and never had another attack.

Again, the nurse should take exercise daily in the open air. Let it be remembered (as before

observed) that nothing tends more directly to maintain a good supply of healthy milk than air and exercise; and the best wet-nurse would soon lose her milk, if constantly kept within doors. Sponging the whole body too with cold water with bay salt in it, every morning, should be insisted upon, if possible: it preserves cleanliness, and greatly invigorates the health. United with this the nurse should rise early, and also be regularly employed during the day in some little portion of duty in the family, an attendance on the wants of the child not being alone sufficient.

SECT. III. — WEANING.

The time when to take place. — The time when weaning is to take place must ever depend upon a variety of circumstances, which will regulate this matter, independently of any general rule that might be laid down. The mother's health may, in one case, oblige her to resort to weaning before the sixth month, and, in another instance, the delicacy of the infant's health, to delay it beyond the twelfth. Nevertheless, as a general rule, both child and parent being in good health, weaning ought never to take place earlier than the ninth (the most usual date), and never delayed beyond the twelfth month.

I should say further, that if child and parent are both in vigorous health, if the infant has cut several of its teeth, and been already accustomed to be partially fed, weaning ought to be gradually accomplished at the ninth month. On the other hand, that if the child is feeble in constitution, the teeth late in appearing, and the mother is healthy and has a sufficient supply of good milk, especially if it be the winter season, it will be far better to prolong the nursing for a few months. In such a case, the fact of the non-appearance of the teeth indicates an unfitness of the system for any other than the natural food from the maternal breast.

And again, if the infant is born of a consumptive parent, and a healthy and vigorous wet-nurse has been provided, weaning should most certainly be deferred beyond the usual time; carefully watching, however, that neither nurse or child suffer from its continuance.

The mode. — It should be effected gradually. From the sixth month most children are fed twice or oftener in the four-and-twenty hours; the infant is in fact, therefore, from this time, in the progress of weaning; that is to say, its natural diet is partly changed for an artificial one, so that when the time for *complete weaning* arrives, it will

be easily accomplished, without suffering to the mother, or much denial to the child.

It is, however, of the greatest importance to regulate the quantity and quality of the food at this time. If too much food is given (and this is the great danger), the stomach will be overloaded; the digestive powers impaired; and, if the child is not carried off suddenly by convulsions, its bowels will become obstinately disordered; it will fall away from not being nourished, and perhaps eventually become a sacrifice to the over-anxious desire of the parent, and its friends, to promote its welfare.

The kind of food proper for this period, and the mode of administering it, are detailed in the section on "Artificial Feeding."

Much exercise in the open air (whenever there is no dampness of atmosphere) is highly necessary and beneficial at this time; it tends to invigorate the system, and strengthens the digestive organs, and thus enables the latter to bear without injury the alteration in diet.

Drying up the milk. — It may be necessary *directly after delivery*, from the delicate health of the mother, — local defect, the nipple, for instance, being too small or obliterated by the pressure of tight stays, — death of the infant, or some equally

urgent cause, to dry up, or "backen the milk," as it is popularly called.

Now it is a very frequent practice to apply cold evaporating lotions to the breast for this purpose. It is true they may produce a rapid dispersion of the milk: but they ought never to be resorted to, as they frequently give rise to symptoms of an alarming and dangerous character. The best and safest local application consists in the following liniment: —

Compound soap liniment, three ounces;
Laudanum, three drachms;
Camphor liniment, one drachm.

Or, if this is found too irritating, compound soap liniment alone. Either of these liniments must be applied warm, and constantly, by means of several layers of linen or flannel, covered by a piece of oiled silk; and the breast gently pressed or rubbed for five or ten minutes, every four or five hours, with warm almond oil.

Sometimes the skin is so thin and sensitive, that the compound soap liniment proves too stimulating, and covers the breast with an irritable eruption. In these cases bread and water poultices must be substituted, but the warm almond oil must also be used as directed in the former cases.

While the breasts remain only moderately hard,

easy, and but little distended with milk, they must not be emptied; for this would encourage further secretion, and they would soon fill again. If, however, they become very hard and painful, and give much uneasiness from their distension, they must be partially emptied, so as just to relieve the distension — nothing more; and this is to be repeated as often as is absolutely necessary.

A gentle saline aperient should be taken every morning, and, if necessary, at night, the object being to keep the bowels slightly relaxed. The diet must be very scanty, and solid nourishment only taken. If, however, the thirst is distressing, it must be allayed by frequently washing out the mouth with toast and water; and an orange or two, or a few ripe grapes, may be taken in the course of the day.

Following up this plan, the distress arising from the extreme distension of the breasts, if it have been present, will be removed; although several days will transpire before the milk is thoroughly dispersed, or the remedies can be discontinued; and a sensation described by females as of "a draught of milk" in the breasts, will sometimes be felt two or three times a day for weeks afterwards.

In reference to drying up the milk *at the time of weaning*, from the circumstance of the child

being partially fed for some time before it is completely weaned, the mother will experience little trouble in dispersing it. She must, however, not neglect to take opening medicine, not only to assist the foregoing object, but also to prevent that depression of spirits, lassitude, loss of appetite, and general derangement of health, which so frequently follow weaning, when these medicines are omitted.

If the breasts should continue loaded, or indeed painfully distended, the aperient must not only be taken so frequently as to keep the bowels gently relaxed, but the diet must be diminished in quantity, and solid nourishment only taken. The breasts, too, if painfully distended, must be occasionally drawn, but only just sufficiently to relieve the distension; they must also be rubbed for five or ten minutes, every four or five hours, with the following liniment previously warmed: —

Compound soap liniment, one ounce and a half;
Laudanum, three drachms.

SECT. IV. — ARTIFICIAL FEEDING.

EXTREME delicacy of constitution, diseased condition of the frame, defective secretion of milk, and other causes, may forbid the mother suckling her child; and unless she can perform

this office with safety to herself and benefit to her infant, she ought not to attempt it. In this case a young and healthy wet-nurse is the best substitute; but even this resource is not always attainable. Under these circumstances the child must be brought up on an artificial diet — "by hand," as it is popularly called. To accomplish this, however, with success, requires the most careful attention on the part of the parent. It is at all times attended with risk. For although with due care the strong and healthy child will thrive and do well, the weak and delicate in most cases will not. It is of great importance, therefore, that the parent superintend the dietetic management of the child herself— at all events, for the early months — and that the rules laid down for her guidance be strictly followed out.

THE KIND OF ARTIFICIAL FOOD UNTIL THE FIRST TEETH APPEAR. — It should be as like the breast milk as possible. This is obtained by a mixture of cow's milk, water, and loaf-sugar, in the following proportions: —

Fresh and pure cow's milk, two thirds;
Boiling water, one third;
Loaf sugar, a sufficient quantity to sweeten slightly.

This is the best diet children can take until two or three teeth are cut. They will be found to

enjoy more perfect health, and thrive far better, when nourished exclusively upon this simple aliment, than upon any other nourishment that can be given. In early infancy mothers are too much in the habit of giving thick gruel, panada, biscuit food, and such matters, thinking that a diet of a lighter and thinner kind will not nourish. This is a mistake, for these preparations are much too solid; they overload the stomach, and cause indigestion, flatulence, and griping. These create a necessity for purgative medicines and carminatives, which again weaken digestion, and, by unnatural irritation, perpetuate the evils which rendered them necessary. Thus many infants are kept in a continual round of repletion, indigestion, and purging, with the administration of cordials and narcotics, who, if their aliment were in quantity and quality suited to their digestive powers, would need no aid from physic or physicians.

In preparing this diet, it is highly important to obtain *pure* milk, not previously skimmed, or mixed with water; and in warm weather just taken from the cow. It should not be mixed with the water and sugar until wanted, and no more made than will be taken by the child at the time, for it must be prepared fresh at every meal. It is best not to heat the milk over the fire; but let the water be in a boiling state when mixed with it, and thus given to the infant tepid or lukewarm.

As the infant advances in age, the proportion of milk may be gradually increased; this is necessary after the second month, when three parts of milk to one of water may be allowed. But there must be no change in the kind of diet if the health of the child is good, and its appearance perceptibly improving. Nothing is more absurd than the notion, that in early life children require a variety of food; only one kind of food is prepared by nature, and it is impossible to transgress this law without marked injury.

Cow's milk sometimes unfortunately disagrees with an infant, even from birth. Let it not, however, be given up as unsuitable, except after a *fair* trial. Sometimes all that is required to make it agree is to alter somewhat the proportions of the milk and water, rather more of the one and less of the other. Sometimes, particularly in large towns, the secret of disagreement exists in the impurity of the milk itself; sometimes it arises from a want of due care in its preparation, or perhaps in the mode of administering it. But when it is found, notwithstanding a due and rigid attention to all these points, that it is still unsuitable, then ass's milk may be given as a substitute. This must be diluted with one-third its quantity of water, and the same care must be observed in its preparation as with the former

kind of nourishment. I recollect a case strikingly showing the value of this aliment: —

A lady whom I have attended in four confinements, is unable from defect in her nipples to suckle her children. Her *first child* had a healthy wet-nurse, and is now a fine healthy lad. The *second*, a girl, was unfortunate in her wet-nurse, she being of a strumous and unhealthy constitution, although to a casual observer having the appearance of sound health: the child, consequently, lived only three months, and the nurse died of a rapid consumption shortly after. This, I am sorry to say, discouraged the mother from adopting wet-nurse suckling for the *third child;* and an artificial diet of cow's milk was resorted to. The third day from commencing this plan, flatulence, griping, purging, and vomiting came on, one symptom quickly following the other; the child wasted, and on the sixth day had several convulsive fits. The diet was changed to ass's milk, and in less than twelve hours the sickness and purging ceased; the flatulence was relieved; the motions from being green, watery, and passed with violence and pain, became of a healthy consistence and colour, and the screaming ceased; the symptoms did not return; the infant thrived upon its new diet, and is now a fine healthy girl. Again this patient was confined, and of her *fourth child.* A wet-nurse was again declined; an ass could not be imme-

diately obtained, and therefore again cow's milk was resorted to. In two or three days precisely the same train of symptoms came on with which the third child had been affected, and which again gave way upon following up the same plan of diet —the substitution of the ass's milk for that of the cow.

The evident conclusion from the foregoing case is this, that the breast-milk of a healthy woman is incomparably the most suitable diet for the infant; but that, if she be not of a healthy constitution, it may be destructive to the child; and that when pure and wholesome breast-milk cannot be obtained, and cow's milk is found to disagree, ass's milk may sometimes be resorted to with the happiest results.

An infant will generally consume a quart, or a little more, of ass's milk in the four-and-twenty hours; and as this quantity is nearly as much as the animal will give, it is best to purchase an ass for the express purpose. The foal must be separated from the mother, and the forage of the latter carefully attended to, or the milk will disagree with the child.

Sometimes the mother's breast and every description of milk is rejected by the child; in which case recourse must be had to sago or arrow-root, sweetened with a little loaf sugar, and prepared as to be presently described, except without the milk.

It may be even necessary to resort to weak beef, veal, or mutton tea; one of these mixed with a very small quantity of farinaceous food, and a few grains of salt. These preparations must be carefully passed through a sieve before they are poured into the sucking-bottle.

The mode of administering it. — There are two ways — by the spoon, and by the nursing-bottle. The first of these ought never to be employed at this period, inasmuch as the power of digestion in infants is very weak, and their food is designed by nature to be taken very slowly into the stomach, being procured from the breast by the act of sucking; in which act a great quantity of saliva is secreted, and being poured into the mouth, mixes with the milk and is swallowed with it. This process of nature, then, should be emulated as far as possible; and food (for this purpose) should be imbibed by suction from a nursing-bottle: it is thus obtained slowly, and the suction employed secures the mixture of a due quantity of saliva, which has a highly important influence on digestion.

Too much care cannot be taken to keep the bottle perfectly sweet. For this purpose there should always be two in the nursery, to be used alternately; and, if any food remain after a meal, it must be emptied out. The bottle always to

be scalded out after use. The flat glass nursing-bottle itself is too well known to need description: it may be well, however, to say a word about the teat that covers its narrow neck, and through which the infant sucks the food.

If the artificial or prepared cow's teat is made use of, it should be so attached to the bottle that its extremity does not extend beyond its apex more than half or three quarters of an inch; for if it projects more than this, the child will get the sides of the teat so firmly pressed together between its gums, that there will be no channel for the milk to flow through. Many mothers prefer using washed chamois leather instead of the teat, which is firmly attached to the end of the bottle by thread, and a small opening made at the extremity for the milk to pass through. This is a good substitute; but a fresh piece of leather must be made use of daily, otherwise the food will be tainted, and the child's bowels deranged. Both teat and wash-leather should have placed in them a small conical piece of sponge, to prevent the possibility of too rapid a flow of the milk.

The most cleanly and convenient apparatus is a cork nipple, upon the plan of M. Darbo, of Paris, fixed in the sucking-bottle.* The cork, being of a particularly fine texture, is supple and elastic,

* This is sold by Weiss and Son, 62. Strand.

yielding to the infant's lips while sucking, and is much more durable than the teats ordinarily used.

Whatever kind of bottle or teat is used, however, it must never be forgotten that cleanliness is absolutely essential to the success of this plan of rearing children.

The quantity of food to be given at each meal.—This must be regulated by the age of the child and its digestive power. A little experience will soon enable a careful and observing mother to determine this point. As the child grows older, the quantity of course must be increased.

The chief error in rearing the young is overfeeding, and a most serious one it is; but which may be easily avoided by the parent pursuing a systematic plan with regard to the hours of feeding, and then only yielding to the indications of appetite, and administering the food slowly, in small quantities at a time. This is the only way effectually to prevent indigestion and bowel complaints, and the irritable condition of the nervous system, so common in infancy, and secure to the infant healthy nutrition, and consequent strength of constitution. As has been well observed, "Nature never intended the infant's stomach to be converted into a receptacle for laxatives, carminatives, antacids, stimulants, and astringents; and when these become necessary, we may rest

assured that there is something faulty in our management, however perfect it may seem to ourselves."

The frequency of giving food.—This must be determined, as a general rule, by allowing such an interval between each meal as will insure the digestion of the previous quantity, and this may be fixed at about every three or four hours. If this rule is departed from and the child receive a fresh supply of food every hour or so, time will not be given for the digestion of the previous quantity; and, as a consequence of this process being interrupted, the food passing on into the bowel undigested will there ferment and become sour; will inevitably produce colic and purging, and in no way contribute to the nourishment of the child.

The posture of the child when fed.—It is important to attend to this. It must not receive its meals lying; the head should be raised on the nurse's arm — the most natural position, and one in which there will be no danger of the food going the wrong way, as it is called. After each meal the little one should be put in its cot, or repose on its mother's knee, for at least half an hour. This is essential for the process of digestion, as

exercise is important at other times for the promotion of health.

THE KIND OF ARTIFICIAL FOOD SUITABLE AFTER THE FIRST TEETH HAVE APPEARED. — As soon as the child has got any teeth, and about the sixth or seventh month one or two will make their appearance, the artificial food may be increased in quantity and strength. If the child has hitherto been living upon cow's milk and water, the latter may be discontinued and pure milk alone given, to be continued for a month or two longer if the child continue to thrive.

More solid food, however, will now in most cases be demanded, such as the mixture of some farinaceous preparation with milk. The following in the order in which they stand may be resorted to, and that fixed upon which suits best: —

Hard's Farinaceous Food.— Mix a table spoonful with a small quantity of cold water, add half a pint of boiling water, constantly stirring, then boil it eight minutes, strain through a sieve, add a small quantity of pure and fresh cow's milk, loaf sugar, and a few grains of salt. This preparation is recommended in preference to biscuit powder, and many other articles of diet of this class, from the deservedly high character it has obtained; and so long as it continues to be carefully prepared by

the maker, it will be found a very valuable article of food for infants.

Leman's Tops and Bottoms.— Steep in boiling water a top and bottom for ten minutes, add a little pure and fresh cow's milk, strain through a sieve, and mix with it a few grains of salt. This food sometimes agrees better when prepared as follows:— have a saucepan on the fire with exactly the quantity of water required. When fast boiling throw into it a top and bottom; let it boil five or six minutes; it will then be a clear smooth jelly, and when strained nothing will remain in the sieve. Thin it with a little fresh and pure cow's milk, and add a few grains of salt.

Sago. — Take a dessert spoonful of pearl sago, macerate it for two hours in half a pint of water in a pan on the hob, and then boil it for a quarter of an hour, stirring it well; then strain through a sieve and sweeten with a little loaf sugar, and add a few grains of salt; milk is to be added or not, as it is found to agree best.

Arrow-root. — Take a dessert spoonful of arrow-root powder, and carefully mix it with a little cold water in a basin with a spoon. Then pour upon it half a pint of boiling water, assiduously stirring until it is thoroughly mixed. Boil it for five minutes, add a little fresh and pure cow's milk, and sweeten with loaf sugar.

When one or two of the large grinding teeth have appeared, beef-tea, veal or mutton tea, or chicken broth may be given once in the day. As these animal preparations are not always properly made, and then disagree, the following formulæ are given, extracted from Dr. A. T. Thomson's work on the Domestic Management of the Sick Room: —

Beef Tea. —"Take half a pound of good rump-steak, cut it into thin slices, and spread these in a hollow dish; sprinkle a little salt over them, and pour upon the whole a pint of boiling water. Having done this, cover the dish with a plate, and place it near the fire for an hour, then throw the sliced beef and the water into a pan, cover it, and boil for fifteen minutes, after which throw the whole contents of the pan upon a sieve, so as to separate the beef-tea from the meat. The tea must be reduced to the strength required by the addition of boiling water."

Veal Tea. —"This may be made in the same manner as beef-tea, using a pound of fillet of veal freed from fat, and sliced, and a pint and a half of boiling water, and boiling for half an hour instead of fifteen minutes. It may also be made with the same quantity of the fleshy part of a knuckle of veal.

"By boiling down the knuckle of veal-tea, whilst the meat is in it, to one half, and straining, the tea gelatinizes, and when it is poured into small cups

it will keep good for several days. By adding an equal quantity, or more, of boiling water to a cupful of this jelly, a moderate quantity of veal-tea for one individual is prepared in two minutes."

Mutton Tea. — "This is prepared with a pound of good mutton, freed from the fat and cut in thin slices, and a pint and a half of soft water, in the same manner as beef-tea, but it requires to be boiled after the maceration, for half an hour, before it is strained through a sieve."

Chicken Tea. — "Take a small chicken, free it from the skin and from all the fat between the muscles, and having divided it longitudinally into two halves, remove the whole of the lungs, and every thing adhering to the back and the side bones. Then cut it, bones and muscles, by means of a strong sharp knife, into as thin slices as possible; and having put these into a pan with a sufficient quantity of salt, pour over it a quart of boiling water; cover the pan, and boil with a slow fire for two hours. Then put the pan upon the hob for half an hour, and strain off the tea through a sieve."

As the child advances in age, that is to say, after a month or two from the time we are now referring to, and as an introduction to the use of a more completely animal diet, a portion, now and then, of a soft boiled egg may be given; and by and by a small bread-pudding, made with one egg in it, may form the dinner meal.

Nothing is more common than for parents during this period to give their children *animal food.* This is a great error. It has been well said by Sir James Clark, that "To feed an infant with animal food before it has teeth proper for masticating it, shows a total disregard to the plain indications of nature, in withholding such teeth till the system requires their assistance to masticate solid food. And the method of grating and pounding meat, as a substitute for chewing, may be well suited to the toothless octogenarian, whose stomach is capable of digesting it; but the stomach of a young child is not adapted to the digestion of such food, and will be disordered by it." Upon the same subject Dr. John Clarke observes in his Commentaries: — "If the principles already laid down be true, it cannot reasonably be maintained that a child's mouth without teeth, and that of an adult, furnished with the teeth of carnivorous and graminivorous animals, are designed by the Creator for the same sort of food. If the mastication of solid food, whether animal or vegetable, and a due admixture of saliva, be necessary for digestion, then solid food cannot be proper, when there is no power of mastication. If it is swallowed in large masses it cannot be masticated at all, and will have but a small chance of being digested; and in an

undigested state it will prove injurious to the stomach and to the other organs concerned in digestion, by forming unnatural compounds. The practice of giving solid food to a toothless child, is not less absurd, than to expect corn to be ground where there is no apparatus for grinding it. That which would be considered as an evidence of idiotism or insanity in the last instance, is defended and practised in the former. If, on the other hand, to obviate this evil, the solid matter, whether animal or vegetable, be previously broken into small masses, the infant will instantly swallow it, but it will be unmixed with saliva. Yet in every day's observation it will be seen, that children are so fed in their most tender age; and it is not wonderful that present evils are by this means produced, and the foundation laid for future disease."

The diet pointed out, then, is to be continued until the second year. Great care, however, is necessary in its management; for this period of infancy is ushered in by the process of teething, which is commonly connected with more or less of disorder of the system. Any error, therefore, in diet or regimen is now to be most carefully avoided. 'Tis true that in the infant, who is of a sound and healthy constitution, in whom, therefore, the powers of life are energetic, and who up to this time has been nursed upon the breast of

its parent, and now commences an artificial diet for the first time, disorder is scarcely perceptible, unless from the operation of very efficient causes. Not so, however, with the child who from the first hour of its birth has been nourished upon artificial food. Teething under such circumstances is always attended with more or less of disturbance of the frame, and disease of the most dangerous character sometimes ensues. It is at this age, too, that all infectious and eruptive fevers are most prevalent; worms often begin to form, and diarrhœa, thrush, rickets, and cutaneous eruptions, manifest themselves, and the foundation of strumous disease is originated or developed. A judicious management of diet will prevent some of these complaints, and mitigate the violence of others when they occur.

The kind of diet most suitable under the different complaints to which infants are liable. — Artificial food, from mismanagement and other causes, will now and then disagree with the infant. The stomach and bowels are thus deranged, and medicine is resorted to, and again and again the same thing occurs.

This is wrong, and but too frequently productive of serious and lasting mischief. *Alteration of diet*, rather than the exhibition of medicine, should, under these circumstances, be re-

lied on for remedying the evil. Calomel, and such like remedies, "the little powders of the nursery," ought not to be given on every trivial occasion. More mischief has been effected, and more positive disease produced, by the indiscriminate use of the above powerful drug, either alone or in combination with other drastic purgatives, than would be credited. Purgative medicines ought at all times to be exhibited with caution to an infant, for so delicate and susceptible is the structure of its alimentary canal, that disease is but too frequently caused by that which was resorted to in the first instance as a remedy. The bowels should always be kept free; but then it must be by the mildest and least irritating means.

It is a very desirable thing, then, to correct the disordered conditions of the digestive organs of an infant, if possible, without medicine; and much may be done by changing the nature, and sometimes by simply diminishing the quantity of food.

A diarrhœa, or looseness of the bowels, may frequently be checked by giving, as the diet, sago thoroughly boiled in very weak beef-tea, with the addition of a little milk. The same purpose is frequently to be answered by two thirds of arrow-root with one third of milk, or simply thin arrow-root made with water only; or, if these fail Hard's Farinaceous Food mixed with boiled milk.

Costiveness of the bowels may frequently be

removed by changing the food to tops and bottoms steeped in boiling water, and a small quantity of milk added. Or Densham's Farinaceous Food (which is a mixture of three parts of the best wheat-flour and one part of the best barley-meal) may be used. The barley makes this preparation somewhat laxative. Mix a table spoonful with a small quantity of cold water, add half a pint of boiling water, constantly stirring, then boil eight minutes, strain through a sieve, add a small quantity of unboiled, pure, and fresh cow's milk, a little loaf sugar, and a few grains of salt.

Flatulence and griping generally arise from an undue quantity of food, which passing undigested into the bowels, they are thus irritated and disturbed. This may be cured by abstinence alone. The same state of things may be caused by the food being over-sweetened — sometimes from its not being prepared fresh at every meal, or even from the nursing-bottle or vessel in which the food is given not having been perfectly clean. In this case weak chicken-broth or beef-tea freed from fat, and thickened with soft boiled rice or arrow-root, may be given.

SECT. V. — DIET AND REGIMEN OF CHILDHOOD.

CHILDHOOD, as has been before intimated, extends from about the second to the seventh or

eighth year, when the second dentition is commenced. No precise rules of diet can be laid down for this period, as this requires to be adapted in every case to the particular constitution concerned. There are, however, certain general principles which must be acted upon, and which can be easily modified by a judicious and observant parent, as circumstances and constitution may require.

GENERAL DIRECTIONS.—The diet of the latter months of infancy is still to be continued, but with the important addition of animal food, which the child has now got teeth to masticate. This must be given in small quantity: it should be of the lightest quality; at first only allowed on alternate days, and even then its effects must be carefully watched, as all changes in the regimen of children should be gradual.

The meals should be given at intervals of about four hours: thus—*breakfast* between seven and eight o'clock, to consist of tops and bottoms, steeped in boiling water, a little fresh and pure cow's milk added, as also a few grains of salt, and loaf sugar to sweeten, if necessary;—or pour upon some bread just enough boiling water to soften it, cover it up for a minute or two in the steam, then add the fresh milk, a little salt, and sweeten with sugar. *Dinner* about twelve o'clock, to consist,

every other day, of a small quantity of animal food (chicken, fresh mutton, or beef, being the only meats allowed) with a little bread and water; on the alternate days, a well boiled rice and milk pudding, or a plain bread, sago, tapioca, or arrow-root pudding, containing one egg; or farinaceous food, with beef-tea. The *afternoon meal*, about four o'clock, the same diet as formed the breakfast. At *seven*, a little arrow-root, made with a very small proportion of milk, or a biscuit, or a crust of bread, after which the child should be put to bed.

As the child grows older, the quantity at each meal should be increased, and the quality somewhat altered. Pure milk, boiled or not as it is found best to agree, may with bread form the breakfast and afternoon meals. And at dinner, meat and bread, with a small quantity of vegetable, and toast and water, may be taken daily.

And now the child should be taught a golden rule in connection with his diet, which, if it only once becomes *a habit*, will be of the most essential service to his health as long as he lives: he must be taught to take his food slowly, retain it in his mouth long, and swallow it tardily; and to take nothing in the intervals of his meals. In connection with this, the mother has a very important duty to perform; carefully day by day to

see to the quality and quantity of the food given. Her care will be amply rewarded in the freedom from disease and health of her children. I might cite many instances to prove the truth and importance of the foregoing remarks, and to show how fruitful of evil is their neglect; but the following case has just occurred, and therefore I select it:—

Sent for at nine o'clock at night, to visit a child supposed to be dying. Found a fine little fellow, four years old, lying on his back in bed in a violent fit of convulsions. The front and upper part of his night-dress, shirt, and pillow-case covered with a large quantity of unmasticated and undigested food which had been vomited a short time before. It appeared that he had been put to bed at eight o'clock, apparently in good health, and that about an hour afterwards his brother, lying by his side, had been awoke by a piercing and loud cry, when the little patient was found by his father in convulsions. A succession of fits continued till four in the morning, the child being unconscious the whole time. At this hour the remedies employed began to produce a good effect, the convulsions ceased, and consciousness returned. Feverish and other symptoms ensued, but health was regained after a few days. Now this attack, which was most severe and gave great alarm to the parents, and very

reasonably so, was brought about entirely by the child being allowed to eat at its dinner meal (seven hours before the fits occurred) immoderately,—and much too fast, the food being bolted, not masticated, as proved by what was brought up;—and from a want of due care in the selection of the food, which was boiled pork and apple pudding.

ANIMAL FOOD.—If a child be of *a sound constitution*, with healthy bowels, a cool skin, and clean tongue, the diet may be liberal, and provided it is sufficiently advanced in age, animal food may be taken daily. Too low a diet would stint the growth of such a child, and induce a state of body deficient in vigour, and unfit for maintaining full health: scrofula and other diseases would be induced. At the same time, let the mother guard against pampering, for this would lead to evils no less formidable, though of a different character. And as long as the general health of this child is unimpaired, the body and mind active, and no evidence present to mark excess of nutriment, this diet may be continued. But if languor at any time ensue, fever become manifested, the skin hotter than natural, the tongue white and furred, and the bowels irregular, then, though these symptoms should be only in slight degree, and unattended with any

specific derangement amounting to what is considered disease, not only should the parent lower the diet, and for a time withdraw the animal part, but the medical adviser should be consulted, that measures may be taken to correct the state of repletion which has been suffered to arise. For some time after its removal, care should also be taken to keep the diet under that which occasioned the constitutional disturbance.

But if the child be of *a delicate and weakly constitution*, it will not bear so generous a diet as the foregoing. During the three or four earliest years, it should be restricted chiefly to a mild farinaceous diet, with a small allowance only of meat on alternate days. The constant endeavour of the parent now should be, to seek to increase the digestive power and bodily vigour of her child by frequent exercise in the open air, and by attention to those general points of management detailed in the next chapter. This accomplished, a greater proportion of animal food may be given, and, in fact, will become necessary for the growth of the system, while at the same time there will be a corresponding power for its assimilation and digestion. A great error in the dietetic management of such children is but too frequently committed by parents. They suppose that because their child is weakly and delicate, that the more animal food it takes the more it will be

strengthened, and they therefore give animal food too early, and in too great quantity. It only adds to its debility. The system, as a consequence, becomes excited, nutrition is impeded, and disease produced, ultimately manifesting itself in scrofula, disease in the abdomen, head, or chest. The first seeds of consumption are but too frequently originated in this way. A child so indulged will eat heartily enough, but he remains thin notwithstanding. After a time he will have frequent fever, will appear heated and flushed towards evening, when he will drink greedily, and more than is usual in children of the same age; there will be deranged condition of the bowels, and headache,—the child will soon become peevish, irritable, and impatient; it will entirely lose the good humour so natural to childhood, and that there is something wrong will be evident enough, the parent, however, little suspecting the real cause and occasion of all the evil. In such a child, too, it will be found that the ordinary diseases of infancy, scarlet fever, measles, small pox, &c., will be attended with an unusual degree of constitutional disturbance; that it will not bear such active treatment as other children, or so quickly rally from the illness. "Strength is to be obtained not from the kind of food which contains most nourishment in itself, but from that which is best adapted to the condition of the digestive organs at the time when it is taken."

Of animal food mutton and beef are the best fitted for the nursery; no meat is so digestible as tender mutton; beef, although equally nutritious, from its texture being firmer, is not quite so easily digested. Lamb may occasionally be taken, veal never; it is difficult of digestion, and less nutritive than the older meats. Pork ought equally to be avoided; also all salted meats, the fibre of which becomes so changed by this process, as to render them very difficult of digestion by a young stomach. Fish may occasionally be given; it is however much less nutritive than beef or mutton, and frequently made very indigestible by the addition of either melted butter, lobster, shrimp, or egg sauce, which should therefore never be given to children.

VEGETABLES. — The *potato*, when in good condition, and well boiled, so as to become mealy, forms a nutritious and easily digested article of food for children; and a few weeks therefore after solid animal food is commenced, a small portion of this vegetable may with advantage be taken with it. It is hardly necessary to observe that the hard and waxy, as well as the new potato, are equally indigestible and injurious.

Although the potato ought to be the vegetable in common use, still there are others for which it may occasionally be exchanged.

The *carrot* is very nutritive, but must be thoroughly boiled, or it is indigestible, and it should only be eaten when young.

The *turnip*, although it is not very nutritive, is in general easily digested, and when well boiled and the watery part separated by pressure, does not produce flatulence as supposed by some. *Asparagus* is a nutritive and light kind of aliment, and the only objection to its use is the melted butter, for which pure gravy had always better be substituted. Old asparagus however is very unwholesome. *Cauliflower* and *brocoli* are not very nutritive, but may occasionally be given. *Greens* require great care in the cooking; and if given, they should always be in small quantity, and never to a dyspeptic child, in whom they will be apt to disagree, by producing acidity, flatulence, and their consequences.

It should be remembered that vegetables too little boiled always prove injurious to children: they are indigestible.

SUGAR. — This is a necessary condiment for the food of children; it is wholesome and nutritious. It must however be given at all times in moderation, and to a child at all dyspeptic with caution, as it is apt to give rise to flatulence and acidity. "The fondness of children for saccharine substances," says Dr. Pereira, " may be regarded as a natural

instinct; since nature, by placing it in milk, evidently intended it to form a part of their nourishment during the first period of their existtence. Instead, therefore, of repressing this appetite for sugar it ought rather to be gratified in moderation." Its free use does not injure the teeth as is generally imagined. "During the sugar season," observes Dr. Dunglison, "the negroes of the West India islands drink copiously of the juice of the cane, yet their teeth are not injured; on the contrary, they have been praised by writers for their beauty and soundness; and the rounded form of the body, whilst they can indulge in the juice, sufficiently testifies to the nutrient qualities of the saccharine beverage." Sweetmeats, on the other hand, are most indigestible and seriously injurious; but this is referred to elsewhere.

SALT.—Never deny, but rather encourage in a child the use of salt. It is a necessary article of food, being essential to the preservation of health, and the maintenance of life. Nature has therefore furnished an appetite for it. Dr. Paris says, "One of the ill effects produced by an unsalted diet is the generation of worms. In Ireland, where from the bad quality of the food the lower classes are greatly infested with worms, a draught of salt and water is a popular and efficacious an-

thelmintic. Lord Sommerville, in his address to the Board of Agriculture, gave an interestiug account of the effects of a punishment which formerly existed in Holland. "The ancient laws of the country ordained men to be kept on bread alone, *unmixed with salt*, as the severest punishment that could be inflicted upon them in their moist climate. The effect was horrible; these wretched criminals are said to have been devoured by worms engendered in their own stomachs." The wholesomeness and digestibility of our bread are undoubtedly much promoted by the addition of the salt which it so universally receives. A pound of salt is generally added to each bushel of flour. Hence it may be presumed that every adult consumes two ounces of salt per week, or six pounds and a half per annum, in bread only. Dr. Pereira says: "It has been calculated that the average annual consumption of salt by an adult amounts to 16 lbs.; equal to about 5 ounces per week."

In early infancy salt in small quantity may always be added with great advantage to the farinaceous food.

FRESH FRUITS.—As a general rule every kind of fresh fruit is injurious to a *delicate* child, with the exception of the orange. This fruit when quite ripe, is rarely inadmissible; the skin

and seeds however must be scrupulously rejected. The juice, too, forms a refreshing and grateful beverage, and in some of the complaints of childhood is useful in allaying thirst and diminishing preternatural heat. When unripe it is almost sure to cause griping, and should not be allowed, even with the addition of sugar.

A healthy child, whose digestive organs are vigorous, and in whom there is no liability to bowel derangement, may be permitted occasionally to partake of most fresh fruits, but (and let this be ever acted upon) in moderate quantity. Apples and pears when perfectly ripe, and well masticated, are not unwholesome. It is somewhat hazardous, however, to allow these fruit in the raw state to a very young child, lest they should not be properly masticated; and it need scarcely be added that the unripe apples which children are so frequently allowed to take are not only indigestible, but sometimes seriously hurtful. The apple when roasted forms a pleasant repast, and where there is a costive habit is useful as a laxative. Of the stone-fruits, the ripe peach, the apricot, and nectarine are the most wholesome, but cherries ought never to be allowed: they do not agree with children, and besides this the stones are not unfrequently swallowed, when they sometimes produce very alarming and occasionally fatal results. The grape is delicious, as well as

cooling and antiseptic, but the skin and seeds must be carefully rejected. Of the small-seeded fruits, the ripe strawberry and raspberry are most wholesome; the latter when taken freely promotes the action of the bowels. The gooseberry is less wholesome, on account of the indigestibility of the skin, which is too frequently swallowed. The fresh currant I object to for young children on account of the seeds, which I have known to be retained in the bowels for days and even weeks, irritating the lining membrane, and thus exciting and keeping up a diarrhœa which immediately got well upon their expulsion.

DRIED FRUITS AND SWEETMEATS. — These a *young* child should never be permitted to take; they are a fruitful source of disorder. And yet no indulgence is so common in some families as this; and because it is not generally attended with an immediate bad effect, it is never thought to be injurious. The practice of having young children down after the parent's late dinner and giving them the dried and preserved fruits and other confectionary which may be on the table, is very productive of indigestion and bowel complaints. Again and again have I traced to this habit illness of a serious and protracted character. Dr. Eberle very justly says: "The conduct of parents in relation to this subject is often extremely

irrational and pernicious in its consequences. They would not themselves venture on the frequent and free use of confectionaries of this kind; and yet will indulge their children without scarcely any restraint in the use of these pernicious luxuries. The sicklier and weaker a child is, the more apt in general is it to be allowed these destructive gratifications. The pale, feeble, and sickly child, whose stomach is hardly able to digest the most simple and appropriate aliment, is sought to be appeased and delighted by the luscious and scarcely digestible articles of the confectioner. Indigestion, intestinal irritation, terminating often in ulceration and incurable diarrhœa, are the frequent consequences of such conduct; and at best, such indulgences must inevitably prolong the feeble and sickly condition of the child, and not unfrequently eventuate in permanent constitutional infirmity." My own observation and experience confirms most fully the truth of this sad statement. In families where there is much dinner company, as a general rule, there is always more disorder of the digestive organs of the children than where this is not the case.

The dried grape or raisin should be given to children with caution, and, indeed, they are better altogether without them. If eaten freely they are apt to disorder the digestive organs and cause flatulence; but more than this, the skins, which

are not digestible even by the stomach of the adult, are liable to remain in the bowels, and cause very serious illness. Dr. Eberle speaks of three instances occurring to him, in which convulsions and speedy death were unequivocably the consequence of overcharging the stomach with this fruit; and he relates another case of the child of a medical friend of a most alarming character, produced by the same cause. "The infant appeared to be well when put to bed. On attending it about midnight, it was found cold, pulseless, with a deathlike expression of the countenance, and apparently dying. In a short time spontaneous vomiting came on by which a large quantity of raisins was thrown from the stomach, after which all the alarming symptoms speedily disappeared. The raisins had been given to the child by a servant of the family without the knowledge of its parents."

WATER. — This should be the only beverage throughout childhood — toast-and-water, if the child prefer it, which is rendered slightly more nutritive than the more simple fluid. The water employed in its preparation, however, must be at a boiling temperature, and it ought to be drunk as soon as it has sufficiently cooled; for by being kept, it acquires a mawkish and unpleasant flavour.

WINE, BEER, AND SPIRITS. — The practice of giving wine, or, indeed, any stimulant, to a healthy child, is highly reprehensible; it ought never to be given but medicinally.

The circulation in infancy and childhood is not only more rapid than in the adult, but easily excited to greater vehemence of action; the nervous system, too, is so susceptible, that the slightest causes of irritation produce strong and powerful impressions: the result in either case is diseased action in the frame, productive of fever, convulsions, &c.; wine, accordingly, is detrimental to children.

An experiment made by Dr. Hunter upon two of his children illustrates, in a striking manner, the pernicious effects of even a small portion of intoxicating liquors in persons of this tender age. To one of the children he gave, every day after dinner, a full glass of sherry: the child was five years of age, and unaccustomed to the use of wine. To the other child, of nearly the same age, and equally unused to wine, he gave an orange. In the course of a week, a very marked difference was perceptible in the pulse, urine, and evacuations from the bowels of the two children. The pulse of the first was raised, the urine high coloured, and the evacuations destitute of their usual quantity of bile. In the other child, no change whatever was produced. He then re-

versed the experiment, giving to the first the orange, and to the second the wine, and the results corresponded: the child who had the orange continued well, and the system of the other got straightway into disorder, as in the first experiment.

Marcellin relates an instance of seven children in a family whose bowels became infested with worms, from the use of stimulants. They were cured by substituting water for the pernicious beverage.

In this town, spirits, particularly gin, are given to infants and children to a frightful extent. I have seen an old Irish woman give diluted spirits to the infant just born. A short time since one of these dram-drinking children, about eight years of age, was brought into one of our hospitals. The attendants, from its emaciated appearance, considered the child was dying from mere starvation; which was true enough in a certain sense. Food was accordingly offered and pressed upon it, but the boy would not even put it to his lips. The next day it was discovered that the mother brought the child very nearly a pint of gin, every drop of which before night he had consumed.

It is easy to discover when children have been fed upon spirits: they are always emaciated; have a lean, yellow, haggard look: the eyes sunk,

the lips pale, and the teeth discoloured, the cadaverous aspect of the countenance being most fearful. They are continually suffering from bowel complaints and convulsive disorders; which, under these circumstances, terminate invariably in an early death.

CHAPTER II.

GENERAL MANAGEMENT.

SECT. I. — THE NURSERY.

A LARGE portion of the early years of children being spent in the nursery and under the immediate care of dependents, the apartments they inhabit and the person or persons who have the charge of them, ought to be a matter of no small moment to a parent. Upon the proper regulation of the one, and the judicious selection of the other, will their health and future welfare much depend.

The nursery ought never to be upon the ground floor: damp or damp air being very injurious to children. If possible it should command a pleasant prospect without, and be light and cheerful within. The light of the sun has a powerful influence upon the growth and healthy developement of the body; and if children are immured in cheerless rooms, looking into dark shrubberies, or on the back-yards and chimneys of a town, their health must inevitably suffer. There should always be a day and a night nursery. The day-

nursery must be well ventilated and cleaned before the children go into it in the morning, and the sleeping room or rooms must have the same care bestowed upon them during the day. By such an arrangement the children will breathe day and night a pure and wholesome atmosphere. The nursery must be of good size with but little furniture in it, not only for better ventilation, but that there may be ample space for the children to exercise and amuse themselves in. No cooking or washing of linen,—no chimney-boards or stopping-up of chimneys in the summer,—nothing in short that would interfere with the purity and freshness of the atmosphere, must ever be permitted in the nursery. Its temperature must be carefully regulated, and never allowed to rise above 65°. Heated rooms make children very susceptible of disease, particularly during the period of teething; and such as are accustomed to immoderately warm rooms will always when taken into the cold external air be much more liable to suffer than others, and during cold and humid weather will seldom be free from coughs and colds. The best mode of warming a nursery is by means of a good coal-fire, well guarded by a high and firmly fixed fender. The lower half of the windows should always be guarded with iron bars—a precaution which has saved many a life. Let the floor of the nursery be

carpeted; this is particularly necessary during early infancy. I have known very serious illness to arise from blows received from a fall on the bare boards of a nursery floor; a soft carpet is the most likely means to prevent this. Never have any unnecessary furniture in this apartment; and as few things as possible ought to be left within the reach of children which they are not to touch. Painted toys should never be allowed to very young children; they carry them to their mouths (particularly if teething), and sucking off the paint, there is great danger of their health suffering from the lead which is thus swallowed.

In reference to *the nurse-maid* it is not for me to point out the qualifications such an individual should possess, or to dwell upon the duties she has to perform. Still I cannot refrain from reminding the mother that although she is the guardian of the physical and moral health of her children, she must yet recollect that the nurse-maid must necessarily have a considerable influence over the culture of both. The most watchful parent cannot be every moment in her nursery, but her nurse-maid lives there. Day and night she has the care of and is the companion of the little ones. She looks after their persons, food, clothing and apartments,—their amusements, exercise and rest,—and she must necessarily, more or less, have to do with the formation of their moral character.

Not only the present health then, and well-doing of the children, but their conduct and happiness in future life will, to a great degree, be influenced by the manner in which the nurse-maid's duty is performed. How careful therefore ought a mother to be in the selection of this individual.

I would further observe, that *cleanliness* is essential in a nurse. Without thorough cleanliness the health and comfort of children must greatly suffer. Their persons, clothes, bed-clothes and beds must ever be kept clean, pure and sweet; and depend upon it this will never be the case, if the nurse who has the charge of them is not in herself in all respects cleanly. Never be satisfied with a nurse merely washing her face and hands upon rising in the morning, and the latter during the day as occasion may oblige her; but require a thorough ablution of the whole body, every or every other morning. This will not be thought by any means a work of supererogation, when it is remembered that one or other of the little ones is in the nurse's arms the greater part of the day, and, perhaps, during the night one has to sleep with her.

Again, a happy, cheerful disposition in a nurse has a most beneficial influence on the character and health of children. The youngest child is sensibly affected by the feelings apparent in the faces of those around him. How beautifully is this

fact illustrated in the following quotation from the diary of a titled and amiable woman of former times, which although a fiction, the paragraph I quote is so true to nature that I cannot refrain from inserting it. Speaking of her first and infant boy, she writes:— "Yesterday it happened as I nursed him, that being vexed by some trifling matters that were not done as I desired, the disturbed expression of my countenance so distressed him that he uttered a complaining cry; made happy by a smile and by the more serene aspect that affection called forth, he nestled his little face again in my bosom, and did soon fall asleep. It doth seem a trifling thing to note, but it teacheth the necessity of watchfulness." * An active, cheerful, good-humoured nurse, by regular affectionate attendance, by endeavouring to prevent all unnecessary suffering, and by quickly comprehending the language of signs of her little charge, will *make* a child good-humoured. Yet, on the other hand, the best-humoured woman in the world, if she is stupid, is not fit to have the care of a child, for it will not be able to make her understand any thing less than vociferation. A careless, negligent, and passionate woman will not only injure the temper of the child, but its health too. If possible, avoid placing children under the charge

* Diary of Lady Willoughby, p. 11.

of an individual suffering from any great natural defect — a person who squints, for instance, or who may have lost an eye, — or who is lame, or particularly ugly, — or even one who has a bad expression of countenance. Any one who stutters, or has any kind of impediment in her speech, — nay, any one whose voice is particularly harsh and loud, — or whose manners are rough and clumsy, — is not a fit person to have charge of children.

A nurse should be an early riser. She will thus betimes have her nursery well-ventilated and cleaned, and ready for the children, who are generally early risers, or ought to be. In order for this to be habitually carried out, arrangements must always allow the nurse-maid to retire to rest early.

A nurse-maid should be fully impressed with the importance of promptly informing the parents of any circumstances connected with the health of the children that from time to time may demand attention. An observant nurse will often, by thus timely drawing attention to slight indisposition, prevent serious disease. — And she should, on no account, conceal any injury the child may have sustained.

SECT. II. — SLEEP.

DURING INFANCY. — FOR several weeks after birth the infant sleeps more or less, day and night, only waking to satisfy the demands of hunger; at the expiration of this time, however, each interval of wakefulness grows longer, so that it sleeps less frequently, but for longer periods at a time.

This disposition to repose in the early weeks of the infant's life must not be interfered with; but this period having expired (about the third month), great care is necessary to induce regularity in its hours of rest, otherwise too much will be taken in the day time, and restless and disturbed nights will follow. The child should be brought into the habit of sleeping in the middle of the day, and for about two hours, more or less (say from eleven to one o'clock), and again for half an hour or an hour about three o'clock, not later; for if put to rest at a later period of the day, it will inevitably cause a bad night. And it is now important that he should not be put to sleep immediately after a meal, as the process of digestion would cause the sleep to be uneasy, and therefore not so refreshing. It is right to observe, in reference to the amount of sleep required by infants, this necessarily differs somewhat in dif-

ferent children. An observant parent, however, will soon determine for herself what is required, and the regulations laid down above will be found generally applicable. The chamber should always be darkened, and the room kept as free from noise as possible.

At first the infant should sleep with its parent. The low temperature of its body, and its small power of generating heat, render this necessary. If it should happen, however, that the child has disturbed and restless nights, it must immediately be removed to the bed and care of another female, to be brought to its mother at an early hour in the morning, for the purpose of being nursed. This is necessary for the preservation of the mother's health, which through sleepless nights would of course be soon deranged, and the infant would also suffer from the influence which such deranged health would have upon the milk.

When a month or six weeks has elapsed, the child, if healthy, may sleep alone in a cradle or cot, care being taken that it has a sufficiency of clothing, that the room in which it is placed is sufficiently warm, viz. 65°, and the position of the cot itself is not such as to be exposed to currents of cold air. It is essentially necessary to attend to these points, since the faculty of producing heat and consequently the power of maintaining the temperature, is less during sleep than

at any other time, and therefore exposure to cold is especially injurious. It is but too frequently the case that inflammation of some internal organ will occur under such circumstances, without the true source of the disease ever being suspected. Here, however, a frequent error must be guarded against, that of covering up the infant in its cot with too much clothing — throwing over its face the muslin handkerchief — and, last of all, drawing the drapery of the bed closely together. The object is to keep the infant sufficiently warm with pure air; it therefore ought to have free access to its mouth, and the atmosphere of the whole room should be kept sufficiently warm to allow the child to breathe it freely: in winter, therefore, there must always be a fire in the nursery.

The child up to two years old, at least, should sleep upon a feather bed, for the reasons referred to above. The pillow, however, after the sixth month, should be made of horsehair; for at this time teething commences, and it is highly important that the head should be kept cool.

Great care must be taken to keep the bed and bed-clothes of the infant perfectly sweet and clean. They should frequently be taken out and exposed to the air. A very excellent means to prevent their being soiled is the use of Hospital sheeting.

During Childhood. — From the second year

and up to the third or fourth, the child should be permitted to sleep for an hour or so before its dinner. After this time it may gradually be discontinued; but it must be recollected, that during the whole period of childhood more sleep is required than in adult age. The child, therefore, should be put to rest every evening between seven and eight; and if it be in health it will sleep soundly until the following morning. No definite rule, however, can be laid down in reference to the number of hours of sleep to be allowed; for one will require more or less than another. The amount of sleep necessary to preserve health varies according to the state of the body, and the habits of the individual. As already observed, infants pass much the greater portion of their time in sleep. Children sleep twelve or fourteen hours. The schoolboy generally ten. In youth, a third part of the twenty-four hours is spent in sleep. Whilst, in advanced age, many do not spend more than four, five, or six hours in sleep. Regularity as to the time of going to rest is the chief point to attend to; permit nothing to interfere with this, and then only let the child sleep without disturbance, until it awakes of its own accord on the following morning, and it will have had sufficient rest.

It is a cruel thing for a mother to sacrifice her child's health that she may indulge her own vanity,

and yet how often is this done in reference to sleep. An evening party is to assemble, and the little child is kept up for hours beyond its stated time for retiring to rest, that it may be exhibited, fondled, and admired. Its usual portion of sleep is thus abridged, and from the previous excitement, what little he does obtain, is broken and unrefreshing, and he rises on the morrow wearied and exhausted.

Once awake, it should not be permitted to lie longer in bed, but should be encouraged to arise immediately. This is the way to bring about the habit of early rising, which prevents many serious evils to which parents are not sufficiently alive, promotes both mental and corporeal health, and of all habits is said to be the most conducive to longevity.

A child should never be suddenly aroused from sleep; it excites the brain, quickens the action of the heart, and, if often repeated, serious consequences would result. The change of sleeping to waking should always be gradual.

The bed on which the child now sleeps should be a mattress: at this age a feather bed is always injurious to children: for the body, sinking deep into the bed, is completely buried in feathers, and the unnatural degree of warmth thus produced relaxes and weakens the system, particularly the skin, and renders the child unusually susceptible

to the impressions of cold. Then, instead of the bed being made up in the morning as soon as vacated, and while still saturated with the nocturnal exhalations from the body, the bed-clothes should be thrown over the backs of chairs, the mattress shaken well up, and the window thrown open for several hours, so that the apartment shall be thoroughly ventilated. It is also indispensably requisite not to allow the child to sleep with persons in bad health, or who are far advanced in life; if possible, it should sleep alone.

SECT. III. — BATHING AND CLEANLINESS.

DURING INFANCY. — Too much attention cannot be paid to cleanliness; it is essential to the infant's health. There is constantly exhaling from the innumerable pores of the skin a large amount of fluid and solid matter designated in common terms the perspiration. The fluid part of this passes off, and mixes with the atmosphere, but a great portion of the solid part is left adhering to the skin. The latter if not removed, after a time so accumulates, as to obstruct the pores, and necessarily impedes any further exhalation. The result is disordered health, or perhaps an obstinate and troublesome eruption on the skin itself. From this explanation the necessity

and value of cleanliness to the health must be self-evident. Besides however this important consideration Dr. Eberle very justly observes: "The agreeable feelings which entire cleanliness is calculated to produce, as well as the excellent moral influence which it is capable of exerting on the mind, are in themselves of sufficient moment to claim for it the most solicitous attention. Children who are early accustomed to the comfortable and healthful impressions of washing and bathing, will rarely in after life neglect the observance of personal cleanliness; and those on the contrary, who are neglected in this respect during childhood, will seldom manifest a proper regard for this physical virtue, in the subsequent stages of their lives."

The principal points to which especial attention must be paid by the parent are the following:—

Temperature of the Water. — In the early weeks of the infant's life, it should as soon as taken from its bed in the morning be washed in warm water from 96° to 98°, and be put into a bath of the same temperature for a few minutes every evening before it is put to rest. To bathe a delicate infant of a few days or even weeks old in cold water with a view "to harden" the constitution (as it is called), is the most effectual way to undermine its health and entail future disease. By degrees however the water with which it is sponged in the morning should be made tepid, the evening bath

being continued warm enough to be grateful to the feelings.

A few months having passed by, the temperature of the water may be gradually lowered until cold is employed, with which it may be either sponged or even plunged into it, every morning during summer. If plunged into cold water, however, it must be kept in but a minute; for at this period especially, the impression of cold continued for any considerable time depresses the vital energies, and prevents that healthy glow on the surface which usually follows the momentary and brief action of cold, and upon which its usefulness depends. With some children, indeed, there is such extreme delicacy and deficient reaction as to render the cold bath hazardous; no warm glow over the surface takes place when its use inevitably does harm; its effects therefore must be carefully watched.

Drying the skin.—The surface of the skin should always be carefully and thoroughly rubbed dry with flannel,—indeed, more than dry, for the skin should be warmed and stimulated by the assiduous gentle friction made use of. For this process of washing and drying must not be done languidly, but briskly and expeditiously; and will then be found to be one of the most effectual means of strengthening the infant. It is especially necessary carefully to dry the armpits, groins, and nates: and if the child is very

fat, it will be well to dust over these parts with hair-powder or starch contained in a muslin bag: this prevents excoriations and sores, which are frequently very troublesome. Soap is only required to those parts of the body which are exposed to the reception of dirt.

I cannot refrain from quoting a passage here, which I recommend to the consideration of every parent, as no less philosophical than practically true. "During this daily process of washing, which should not be done languidly but briskly and expeditiously, the mind of the little infant should be amused and excited. In this manner dressing, instead of being dreaded, as a period of daily suffering, instead of being painful, and one continued fit of crying, will become a recreation and amusement. In this, treat your infant, even your little infant, as a sensitive and intelligent creature. Let every thing which *must* be done, be made not a source of pain, but of pleasure, and it will then become a source of health, and that both of body and mind; a source of exercise to the one, and of early discipline to the other. Even at this tender age, the little creature may be taught to be patient and even gay, under suffering. Let it be remembered that every act of the nurse towards the little infant is productive of good or evil upon its character as well as health. Even the act of washing and clothing may be

made to discipline and improve the temper, or to try and impair it, and may therefore be very influential on its happiness in future life. For thus it may be taught to endure affliction with patience and even cheerfulness, instead of fretfulness and repining. And every infliction upon the temper is also an infliction upon the body and health of the little child. The parent and the nurse should, therefore, endeavour to throw her own mind into her duties towards her offspring. And in her intention of controlling her infant's temper, let her not forget that the first step is to control her own. How often have I observed an unhappy mother the parent of unhappy children!" *

Napkins.—The frequency of the discharges from the bowels and bladder requires a frequent change of napkins. A nurse cannot be too careful of this duty from the first, so that she may be enabled to discover the periods when these discharges are about to take place, that she may not only anticipate them, but teach the child, at a very early age, to give intelligent warning of its necessities. Thus a habit of regularity with regard to these functions will be established, which will continue through life, and tend greatly to the promotion of health. As the child grows older, the system of cleanliness must in no particular be relaxed; the hair must be regularly

* Letters to a Mother, p. 89.

brushed and combed, and the ears, the eyes, the nose, and the openings of the passages from the interior of the body, as well as the surface of the skin generally, must be kept perfectly clean. The careful adoption of these means will be found the best preservative against those eruptive disorders which are so frequent and troublesome during the period of infancy.

DURING CHILDHOOD.—When the second period or that of childhood arrives, bathing is but too frequently left off; the hands and face of the child are kept clean, and with this the nurse is satisfied; the daily ablution of the *whole* body, however, is still necessary, not only for the preservation of cleanliness, but because it promotes in a high degree the health of the child.

Plan to be pursued with the vigorous and healthy.—A child of a vigorous constitution and robust health, as he rises from his bed refreshed and active by his night's repose, should be put into the shower-bath, or, if this excites and alarms him too much, must be sponged from head to foot with salt water. If the weather be very cold, the water may be made slightly tepid, but if his constitution will bear it, the water should be cold throughout the year. Then the body should be speedily dried, and hastily but well rubbed with a somewhat coarse towel, and the clothes put on

without any unnecessary delay. This should be done every morning of the child's life.

If such a child is at the sea-side, advantage should be taken of this circumstance, and sea-bathing should be substituted. The best time is two or three hours after breakfast; but he must not be fatigued beforehand, for if so, the cold bath cannot be used without danger. Care must be taken that he does not remain in too long, as the animal heat will be lowered below the proper degree, which would be most injurious. In boys of a feeble constitution, great mischief is often produced in this way. It is a matter also of great consequence in bathing children that they should not be terrified by the immersion, and every precaution should be taken to prevent this. The healthy and robust boy, too, should early be taught to swim, whenever this is practicable, for it is attended with the most beneficial effects; it is a most invigorating exercise, and the cold bath thus becomes doubly serviceable.

Plan to be pursued with the delicate and strumous. — If a child is of a delicate and strumous constitution, the cold bath during the summer is one of the best tonics that can be employed; and if living on the coast, sea-bathing will be found of singular benefit. The effects, however, of sea-bathing upon such a constitution must be particularly watched, for unless it is succeeded by a

glow, a feeling of increased strength, and a keen appetite, it will do no good, and ought at once to be abandoned for the warm or tepid bath. The opinion that warm baths generally relax and weaken, is erroneous; for in this case, as in all cases when properly employed, they would give tone and vigour to the whole system: in fact, the tepid bath is to this child what the cold bath is to the more robust.

In conclusion: if the bath in any shape cannot from circumstances be obtained, then cold salt-water sponging must be used daily, and all the year round, so long as the proper reaction or glow follows its use; but when this is not the case, — and this will generally occur, if the child is delicate and the weather cold, — tepid vinegar and water, or tepid salt water, must be substituted.

SECT. IV. — CLOTHING.

In infancy. — *Infants* are very susceptible of the impressions of cold; a proper regard, therefore, to a suitable clothing of the body is essential to their enjoyment of health. Unfortunately an opinion is prevalent, that the tender child has naturally a great power of generating heat and resisting cold; and from this popular error has arisen the most fatal results. This opinion has

been much strengthened by the insidious manner in which cold operates on the frame, the injurious effects not being always manifest during or immediately after its application, so that but too frequently the fatal result is traced to a wrong source, or the infant sinks under the action of an unknown cause. It cannot be too generally known that the power of generating heat in warm-blooded animals is at its minimum at birth, and increases successively to adult age—that young animals therefore, instead of being warmer than adults, are generally a degree or two colder, and moreover part with their heat more readily. These facts show how absurd must be the folly of that system of "hardening" the constitution, which induces some parents to plunge the tender and delicate child into a cold bath at all seasons of the year, and freely expose it to the cold cutting currents of an easterly wind, in the lightest clothing; —cruel as absurd.

The principles which ought to guide a parent in clothing her infant are as follows:—

The material and quantity of the clothes should be such as to preserve a sufficient proportion of warmth to the body—regulated, therefore, by the season of the year, and the delicacy or strength of the infant's constitution. In effecting this the parent must avoid the too common, but frequently fatal, practice of leaving bare, at all seasons of the

year, the neck and upper part of the chest and arms of her little one; such exposure in damp and cold weather being a fruitful source of croup, inflammation of the lungs, and other serious complaints. At the same time a prevalent error in the opposite extreme must be guarded against — that of enveloping the child in innumerable folds of warm clothing, and keeping it constantly confined to very hot and close rooms; since nothing tends so much to enfeeble the constitution, to induce disease, and render the skin highly susceptible of the impressions of cold, and thus produce those very ailments which it is the chief intention to prevent. The infant's clothing should possess lightness as well as warmth, and therefore flannel and calico are the best materials to use. The skin however in the early months is so delicate, that a shirt of fine linen must at first be worn under the flannel; but as the child grows older the flannel is desirable next the skin, giving by its roughness a gentle stimulus to it, and thus promoting health.

They should be so made as to put no restrictions to the free movements of all parts of the child's body — so loose and easy as to permit the insensible perspiration to have a free exit, instead of being confined and absorbed by the clothes, and held in contact with the skin till it gives rise to irritation. Full room too should be allowed for

growth, which is continually and rapidly going on, and particularly should this be the case round the throat, armholes, chest and wrists, so that they may be easily let out. The construction of the dress should be so simple as to admit of being quickly put off and on, since dressing is irksome to an infant, causing it to cry, and exciting as much mental irritation as it is capable of feeling. Pins should be wholly dispensed with, their use being hazardous through the carelessness of nurses, and even through the ordinary movements of the infant itself. This leads me to make one general remark applicable not only to the clothing but also to other circumstances in the economy of an infant — *the babe can itself give no explanation of the inconveniences it suffers.* "Bearing this in mind, and remembering how continually adults are annoyed by trifles which they have the perception to discover and the ability to remove, it will readily be acknowledged that nothing is too insignificant for the constant and regular attention of a mother." For example, "articles of dress contract, or otherwise lose their shape; a ruck forms, a hook bends, or a button turns and presses upon the flesh: any one of these accidents occasions pain, and frets the temper of an infant."

The clothing should be changed daily; this is eminently conducive to health. There should always too be an immediate change of wet and

soiled linen, for that which is fresh and dry. Unless these directions are attended to, washing will, in a great measure, fail in its object, especially in insuring freedom from skin diseases. The wardrobe, therefore, must be sufficiently large to admit of this; and where pecuniary means are not abundant, the mother, in making her baby linen, should remember that quantity is more important than quality.

With regard to *caps*, they should be made of thin material, with no under cap. The head is to be kept cool, not warm. As soon as the hair begins to grow, provided it is not very cold weather, caps may with advantage be left off altogether, night as well as day.

In reference to the clothing of the legs and feet, during the first seven or eight months, the child's clothes extend considerably beyond them; and up to this period, therefore, they are completely protected from cold and the variations of temperature. From this time, however, when short-coating, as it is styled, is commenced, cotton or fine flannel socks should be put on in warm weather, and fine angola stockings during cold weather. Shoes also must now be worn, made of light and pliable materials, and large enough to prevent all constraint to the feet; neither too roomy, nor too tight. Some persons object to the use of shoes, believing that they interfere with the child's learning to walk: if, however,

they are large, and of pliant materials, this cannot be; whilst it must be remembered, on the other hand, that they are useful not only in protecting the feet from cold, but from injury also, for accidents from pins and needles running into the feet are not at all uncommon where children are allowed to walk without them. The change to short-clothing should always be avoided in cold weather.

IN CHILDHOOD.—The clothing of *the child* should possess the same properties as that of the infant. It should afford due warmth, and yet be light, and so made as to occasion no unnatural constriction. In reference to due warmth, it may be well again to repeat, that too little clothing (that state of semi-nudity which the vanity of some parents encourage) is frequently productive of the most sudden attacks of active disease; and that children who are thus exposed with naked breasts and thin clothing in a climate so variable as ours, are the frequent subjects of croup and other dangerous affections of the air-passages and lungs. On the other hand, do not forget that too warm clothing is also a source of disease, sometimes even of the same diseases which originate in exposure to cold, and often renders the frame more susceptible of the impressions of cold, especially of cold air taken into the lungs. Regulate the

clothing, then, according to the season; resume the winter dress early; lay it aside late; for it is in spring and autumn that the vicissitudes in our climate are greatest, and congestive and inflammatory complaints most common.

With regard to *material* (as was before observed), the skin will generally long before this period bear flannel next to it; and it is not only proper that it should be continued, but necessary. It may be put off with advantage during the night, and cotton may be substituted during the summer, the flannel being resumed early in the autumn. If in any given case, flannel proves too irritating to the skin, fine fleecy hosiery will in general be easily endured, and will greatly conduce to the preservation of health.

It is highly important that the clothes of the boy should be so made that no restraints shall be put on the movements of the body or limbs, nor injurious pressure made on his waist or chest. All his muscles ought to have full liberty to act, as their free exercise promotes both their growth and activity, and thus ensures the regularity and efficiency of the several functions to which these muscles are subservient.

The same remarks apply with equal force to the dress of the girl; and happily, during childhood, at least, no distinction is made in this matter between the sexes. Not so, however, when

the girl is about to emerge from this period of life; a system of dress is then but too frequently adopted which has the most pernicious effects upon her health, and the development of the body, —the employment of tight stays, which impede the free and full action of the respiratory organs, being only one of the many restrictions and injurious practices from which in later years they are thus doomed to suffer so severely.

SECT. V. — AIR AND EXERCISE.

DURING INFANCY. — The respiration of a pure air is at all times, and under all circumstances, indispensable to the health of the infant. The nursery therefore, as has already been observed, should be large, well ventilated, in an elevated part of the house, and so situated as to admit a free supply both of air and light. For the same reasons, the room in which the infant sleeps should be large, and the air frequently renewed; for nothing is so prejudicial to its health as sleeping in an impure and heated atmosphere. The practice, therefore, of drawing thick curtains closely round the bed is highly pernicious; they only answer a useful purpose when they defend the infant from any draught of cold air.

The proper time for taking the infant into the

open air, must of course be determined by the season of the year, and the state of the weather. Sir James Clark observes, "A *delicate* infant born late in the autumn will not generally derive advantage from being carried into the open air, in this climate, till the succeeding spring; and if the rooms in which he is kept are large, often changed, and well ventilated, he will not suffer from the confinement, while he will, most probably, escape catarrhal affections, which are so often the consequence of the injudicious exposure of infants to a cold and humid atmosphere." If, however, the child is *strong* and *healthy*, no opportunity should be lost of taking it into the open air at stated periods, experience daily proving that it has the most invigorating and vivifying influence upon the system. Regard, however, must always be had to the state of the weather; and to a damp condition of the atmosphere the infant should never be exposed, as it is one of the most powerful exciting causes of consumptive disease. The nurse-maid, too, should not be allowed to loiter and linger about, thus exposing the infant unnecessarily, and for an undue length of time; this is the source of many of the evils which accrue from taking the babe into the open air.

An infant, too, should never be exposed to an easterly wind, more productive I believe of the numerous cases of inflammation of the lungs than

any other cause. "What have you got there? a baby?" hastily said an old but experienced physician to a young mother one bright sun-shiny morning in spring as she was carrying out her first-born, "go home—go home—the wind is in the east. Never carry abroad a young infant in an easterly wind. That's a golden maxim." Its remembrance and adoption would save the lives of thousands.

Exercise, also, like air, is essentially important to the health of the infant. Its first exercise, of course, will be in the nurse's arms: and here I would observe that *the mode of carrying* an infant must be carefully attended to. Upon this subject I cannot do better than quote the words of Dr. Eberle.* He very truly remarks, that "the spine and its muscles seldom acquire sufficient strength and firmness, before the end of the third month, to enable the child to support its body in an upright position, without inconvenience or risk of injury. Until this power is manifestly acquired, the infant should not be carried or suffered to sit with its body erect, without supporting it in such a manner as to lighten the pressure made on the spine, and aid it in maintaining the upright posture of its head and trunk." He accordingly advises that "at first (a few days after birth) the

* Eberle on the Diseases and Physical Education of Children, p. 45.

infant should be taken from its cradle or bed two or three times daily, and laid on its back, upon a pillow, and carried gently about the chamber." . . . " After the third or fourth week, the child may be carried in a reclining posture on the arm of a careful nurse, in such a way as to afford entire support to the body and head. This may be done by reclining the infant upon the fore-arm, the hand embracing the upper and posterior part of the thighs, whilst its body and head are supported by resting against the breast and arm of the nurse. When held in this way, it may be gently moved from side to side, or up and down, while it is carefully carried through a well-ventilated room." This plan of passive exercise must be followed until the completion of the third month, when the child will have acquired a sufficient degree of muscular power to maintain itself in a sitting posture. In this position it may be carried about for a short time twice or thrice daily, provided the spine and head be supported by the nurse—"an aid which can seldom be prudently dispensed with before the child is six or seven months old."

In the mean time, when two or three months old that is, and it begins to sleep less during the day, the infant will greatly enjoy being occasionally placed upon a soft mattress or sofa, and allowed to roll and kick about at its pleasure. Such

exercise will tend much to develop the powers of its muscular system; it will also learn to use its limbs and walk earlier than if deprived of this freedom of action.

It is a very common practice for a nurse to support a young infant upright on her knee, and begin violently to jolt it up and down—violent, indeed, to the delicate structure of the infant's tender frame. This is done thoughtlessly, and in the belief that it is a source of enjoyment, instead of manifestly inflicting pain on the child. Gentle and cautious tossing, or rather dandling to and fro, is really agreeable to a child, and can never, therefore, be objectionable: but the rough treatment alluded to a mother must carefully prevent. The same precaution, it is necessary to observe, in regard to the rocking an infant in a cradle. I believe that gentle and cautious rocking is a soothing and useful exercise to a child, but it is quite otherwise when rough, and long continued.

By and by, the child will make its first attempts to walk. Now, it is important that none of the many plans which have been devised to teach a child to walk, should be adopted — the go-cart, leading-strings, &c.; their tendency is mischievous; and flatness of the chest, confined lungs, distorted spine, and deformed legs, are so many evils which often originate in such practices. This is explained by the fact of the bones in infancy

being comparatively soft and pliable, and if prematurely subjected by these contrivances to carry the weight of the body, they yield just like an elastic stick bending under a weight, and as a natural consequence become curved and distorted. It is highly necessary that the young and inexperienced mother should recollect this fact, for the early efforts of the little one to walk are naturally viewed by her with so much delight, that she will be apt to encourage and prolong its attempts, without any thought of the mischief which they may occasion; thus many a parent has had to mourn over the deformity which she has herself created. It may be as well here to remark, that if such distortion is timely noticed, it is capable of correction, even after evident curvature has taken place. It is to be remedied by using those means that shall invigorate the frame, and promote the child's general health (a daily plunge into the cold bath, or sponging with cold salt water, will be found signally efficacious), and by avoiding the original cause of the distortion — never allowing the child to get upon his feet. The only way to accomplish the latter intention, is to put both the legs into a large stocking; this will effectually answer this purpose, while, at the same time, it does not prevent the free and full exercise of the muscles of the legs. After some months pursuing this plan, the limbs will be found

no longer deformed; the bones, to have acquired firmness, and the muscles strength; and the child may be permitted to get upon his feet again without any hazard of perpetuating or renewing the evil.

The best mode of teaching a child to walk, is to let it teach itself, and this it will do readily enough. It will first learn to crawl: this exercises every muscle in the body, does not fatigue the child, throws no weight upon the bones, but imparts vigour and strength, and is thus highly useful. After a while, having the power, it will wish to do more: it will endeavour to lift itself upon its feet by the aid of a chair, and, though it fail again and again in its attempts, it will still persevere until it accomplish it. By this it learns, first, to raise itself from the floor; and secondly, to stand, but not without keeping hold of the object on which it has seized. Next it will balance itself without holding, and will proudly and laughingly show that it can stand alone. Fearful, however, as yet of moving its limbs without support, it will seize a chair or anything else near it, when it will dare to advance as far as the limits of its support will permit. This little adventure will be repeated day after day with increased exultation; when after numerous trials, he will feel confident of his power to balance himself, and he will run alone. Now

time is required for this gradual self-teaching, during which the muscles and bones become strengthened; and when at last called upon to sustain the weight of the body, are fully capable of doing so.

DURING CHILDHOOD.—When the child has acquired sufficient strength to take active exercise, he can scarcely be too much in the open air; the more he is habituated to this, the more capable will he be of bearing the vicissitudes of the climate. Children, too, should always be allowed to amuse themselves at pleasure, for they will generally take that kind and degree of exercise which is best calculated to promote the growth and development of the body. In the unrestrained indulgence of their youthful sports, every muscle of the body comes in for its share of active exercise: and free growth, vigour, and health are the result.

If, however, a child is delicate and strumous, and too feeble to take sufficient exercise on foot, —and to such a constitution the respiration of a pure air and exercise are indispensable for the improvement of health, and without them all other efforts will fail,—riding on a donkey or pony forms the best substitute. This kind of exercise will always be found of infinite service to delicate children; it amuses the mind, and

exercises the muscles of the whole body, and yet in so gentle a manner as to induce little fatigue. The exercises of horseback, however, are most particularly useful where there is a tendency in the constitution to pulmonary consumption, either from hereditary or accidental causes. It is here beneficial, as well through its influence on the general health, as more directly on the lungs themselves. There can be no doubt that the lungs, like the muscles of the body, acquire power and health of function by exercise. Now during a ride this is obtained, and without much fatigue to the body. The free and equable expansion of the lungs by full inspiration, necessarily takes place; this maintains their healthy structure, by keeping all the air-passages open and pervious; it prevents congestion in the pulmonary circulation, and at the same time provides more completely for the necessary chemical action on the blood, by changing, at each act of respiration, a sufficient proportion of the whole air contained in the lungs,—all objects of great importance, and all capable of being promoted, more or less, by the means in question.

And be it remembered that these remarks apply with equal force to the girl as to the boy. She should be allowed, and even encouraged, to take the same active exercise. Fortunately, this course is followed during childhood; not so,

unfortunately (in the majority of cases, at least), after this period. Young females are then subjected to those unnatural restraints, both in exercise and dress, which fashion and vanity impose, to be followed by effects which, though not immediately obvious, are capable of laying the foundation of evils that cannot afterwards be remedied.

A good carriage is the point aimed at (and to which I particularly refer), and the means adopted for its cultivation fail, after all, in their end, just in proportion to their rigid employment. For this purpose the head is kept erect, and the shoulders drawn back, and they are to be kept in this position not for an hour or so, but continually. To preserve, however, this unnatural and constrained position, "requires considerable muscular powers, such as no girl can exercise without long, painful, and injurious training; nor even by this, unless other measures be resorted to in aid of her direct endeavours." For instead of the muscles obtaining increased power and strength by these efforts (to enforce a good carriage), they are enfeebled, and soon become more and more incapable of performing what is required of them. "This fact soon becomes perceptible; weakness is noticed; but instead of correcting this by the only rational mode, that of invigorating the weakened muscles, mechanical aid is called in to support them, and

laced waistcoats are resorted to. These undoubtedly give support—nay, they may be so used as almost wholly to supersede the muscular efforts, with the advantage of not tiring, however long or continuously employed. Improvement of carriage is manifested, the child is sensible of relief from a painful exertion, the mother is pleased with the success of her management, and this success appears to superficial observation fully to confirm the judgment which superintends it. Yet what are the consequences to which her measures tend, and which such measures are daily and hourly producing? The muscles of the back and chest, restrained in their natural and healthful exercise by the waistcoat called in to aid them, and more signally, in after-life, by the tightly-laced stays or corsets, become attenuated, and still further enfeebled, until at length they are wholly dependent on the mechanical aid, being quite incapable of dispensing with it for any continuance."

By and by a taper waist becomes an object of ambition, and the stays are laced more closely than ever. This is still done gradually, and, at first, imperceptibly to the parties. The effect, however, though slow, is sure; and the powers of endurance thus exercised, come in time to bear, almost unconsciously, what, if suddenly or quickly attempted, no heroism could possibly sustain.

This increased pressure impedes the motion of the ribs. "For perfect respiration these motions should be free and unrestrained, and perfect respiration is necessary to those changes in the blood which fit it for nutrition, and the other purposes of the animal frame. In proportion as respiration is impeded, is the blood imperfectly vitalised, and in the same ratio are the nutrient and other functions dependent on the blood inadequately performed. Here, then, is one source of debility, which affects the whole frame, reducing every part below the standard of healthful vigour." Quickened respiration soon ensues, the heart becomes excited, the pulse accelerated, and palpitation is in time superadded.

There are still further evils produced by tight lacing. For the pressure being chiefly made on the lower part of the chest, the stomach and liver are necessarily compressed, to the great disturbance of their functions; and being pressed downwards too, these trespass on that space which the other abdominal viscera require, superinducing still further derangements. Thus almost every function of the body becomes more or less impeded.

And, again, the girl not being able always to have her body cased in the tight-laced stays, some relaxation must take place. "Under it the muscles of the back, deprived of their accustomed

support, and incapable of themselves to sustain the incumbent weight, yield, and the column of the spine bends, at first anteriorly, causing round shoulders and an arched back; but eventually inclines to one or other side, giving rise to the well-known and too frequently occurring state of lateral curvature. This last change most frequently commences in the sitting posture, such females being, through general debility, much disposed to sedentary habits." Such, though but very slightly sketched, are a few of the evils attending this baneful practice.

But how, then, is a good carriage to be obtained; which is not only pleasing to the eye, but is, when natural, absolutely conducive itself to health? "To insure a good carriage, the only rational way is to give the necessary power, especially to the muscles chiefly concerned; and this is to be done, not by wearying those muscles by continual and unrelieved exertion, but by invigorating the frame generally, and more especially by strengthening the particular muscles through varied exercise alternated with due repose. Attention to general health, suitable diet, regular bowels, moderate but regular exercise, not of particular muscles only, but of the whole frame, cold-bathing or sponging, and other such measures, will maintain a good carriage, by giving

that power which the more direct means so generally practised serve but to exhaust." In these few remarks on "a good carriage," I have drawn freely from a valuable article of Dr. Barlow's, in the Cyclopædia of Practical Medicine.

CHAPTER III.

OF MEDICINE, AND OF THE USE AND ABUSE OF CERTAIN REMEDIES.

In almost every nursery some medicines are kept, which are given to the children more or less frequently as their trifling ailments occur. And there is no objection to this, provided due care and judgment are exercised by those who administer them, and only those medicines are kept and given, which may be resorted to with safety. Unfortunately this is not the case in all families, and then what misery and destruction to health does not the nursery medicine-chest produce! slowly — unknowingly perhaps, — but not the less surely. If, however, it be granted, that a young mother is not to send for the physician for every trifling ailment of her little one, and surely no one would insist on this, then it is also very plain that there is a certain amount of information in the way of caution as well as instruction about medicine and remedies of which she ought not to be ignorant. For example, it is not required of her to

seek her medical attendant every time her infant needs a dose of castor oil, — but then she surely ought to know something about the quantity of this drug that it is proper to exhibit, as well as the best and least disagreeable form in which it may be given. Then again, in reference to the making of so simple a matter as a bread and water poultice, this is either one of the most comforting and useful of local remedies, or most irritating and useless, according as it is well or ill made: no mother, therefore, ought to be ignorant how to make it; and yet how few possess this knowledge. But more than this, in time of real illness, to carry out the prescriptions of the medical adviser himself, requires a certain amount of information bearing upon the preparation and application of remedial agents, — such for instance as leeches, blisters, and baths,—which it is most important and necessary the parent should be furnished with. It would therefore appear desirable to say a few words even upon medicine and remedies, with which a mother should make herself familiar, that she may not only administer to the trifling ailments of her children with safety, but that she may be enabled to give efficiency and success to the prescriptions of the medical attendant, when disease of an important and serious character attacks them.

Here perhaps is the best and most appropriate

place to remark upon the *mode* of administering medicine itself to children. There is great difficulty sometimes in getting a child to take its medicine. I believe this in most instances to be the fault of the parent. If you are only *firm* in your manner as well as kind, you will always, unless in a very obstinate child indeed, succeed. With such there is only one resource, and that is the employment of the medicine spoon, the invention of Dr. A. T. Thomson, by whom it is thus described: "It consists of a spoon with a hollow handle opening at the top, and also into the bowl of the spoon, which is covered with a hinged lid, but is open at the apex. The spoon is made in the form of a wedge, in order to force the teeth apart when resistance is made to its introduction into the mouth; and it is rounded at the corner to avoid injuring the tongue and gums. When any fluid is poured into the spoon, and the lid shut down, the pressure of the atmosphere upon the fluid, at the opening near the apex, prevents it from running out of the spoon, as long as the orifice at the upper end of the handle is firmly compressed by the thumb of any person; but as soon as the thumb is removed, the fluid is projected with considerable force from the spoon. When the spoon is to be used the head of the child must be steadied by an attendant, who should also compress the nostrils, which obliges

the mouth to be opened for the facility of breathing. The spoon is then to be introduced into the mouth of the child by another person holding it in one hand, and at the same time keeping down the arms of the child with his other hand. The back of the spoon is then to be gently pressed upon the tongue, and the thumb being removed from the opening of the handle, the air rushes in, and projects the medicine into the gullet, whence it is instantly conveyed into the stomach."

SECT. I. — APERIENT MEDICINE.

One of the greatest errors of the nursery is the too frequent and indiscriminate exhibition by the mother or nurse of *purgative* medicine. Various are the forms in which it is given; perhaps, amongst a certain class, the little powder obtained from the chemist is the most frequent, as it is certainly the most injurious, from its chief ingredient being calomel. With such persons the choice of the aperient, or the dose, or the exact condition of the health, or whether it is an aperient at all that is required, are considerations which never for one moment enter their minds: a little medicine is thought necessary, because it is evident the child is not well, and a purgative or a little white powder is forthwith given. I have known a nurse thoughtlessly give a large dose of

magnesia to an infant that had been suffering from a diarrhœa of some days' standing and cause death. Now this medicine is one of the most useful and harmless that can be given to a child when indicated, when prescribed in a dose suited to the age, and when the proper time is fixed upon for its exhibition; in the foregoing case every thing forbad its use, but none of these points were considered. Again, a mother too frequently falls into the too common error of repeating aperient medicine to remove those very symptoms which its previous exhibition has itself produced. Some incidental pain and uneasiness, some slightly greenish appearance of the motions, leads to the belief that more purging is necessary, when in fact both circumstances have probably been induced by the irritation caused by the purgatives already too freely administered. How often is this the case, during the first week or ten days of the infant's life, when the nurse doses the child with tea-spoonful after tea-spoonful of castor oil, for the relief of pain, which her repeated doses of medicine have alone created. It would be well if all who have the management of children were to remember whenever they open the medicine-chest, that "the great art of medicine is the proper application of the proper medicine in the proper dose, at the proper time."

For the information of a young mother it is

important to mention that the bowels of an infant in health should be relieved two, three, or four times in the twenty-four hours; that the stools should be of the consistence of thin mustard, of a lightish yellow colour, free from any fetid or acid smell, destitute of lumps or white curdy matter, and passed without pain or any considerable quantity of wind; and that as the child grows older, while the stools diminish in number, they become darker in colour.

The following purgatives are the only ones that ought to be found in the nursery; and they may be given with perfect safety by the parent, either alone or in the combinations prescribed, provided always the directions laid down are attended to.

CASTOR OIL. — A mild aperient, prompt in its action and effective; it is a medicine, therefore, particularly applicable to infants. It has this great advantage, too, over other purgatives; that while they generally cause, after their action is passed off, a confined state of bowels, this leaves them relaxed.

The dose will depend upon the age and the known effects of aperient medicine upon the child; some requiring more, others less. As a general rule, one to two tea-spoonfuls. To cover its unpleasant flavour it may be given in various ways; — either mixed in warm milk; or floating on pepper-

mint, mint, or some other aromatic water; or, if the stomach is unusually delicate, it may be made into the following emulsion, of which give a dessert-spoonful or more, according to the age, every hour until it operates. Take of

Castor oil, six drachms;
The yolk of an egg;
Dill water, two ounces;
Loaf sugar, two drachms; mix intimately.

For overcoming *habitual costiveness*, no medicine can be so much relied upon as castor oil. It may for this purpose be given daily for some weeks, gradually reducing the dose until only a few drops be taken; after which the bowels will generally continue to act without further artificial assistance.

During teething when there is a *sluggish state of the bowels*, castor oil is a very useful remedy. I am in the habit, however, in this case, of prescribing it in combination with magnesia in a form which I owe to Dr. Eberle, and which is so certain and mild in its operation, while it is really pleasant to the taste, that I find children take it with little or no reluctance. The following is the form, of which give one or two tea-spoonfuls for a dose, and repeat it if necessary. Take of

Castor oil, one ounce;
Calcined magnesia, two drachms;
Loaf sugar, three drachms;
Oil of anise, two drops; mix intimately.

MANNA. — This also may be given with impunity to the youngest infant; it is sweet to the taste, and mild in its operation. *The dose* is from one to three drachms. It may be given in a little warm milk; or, if it cause flatulence in this form, in some aromatic water, as a dessert-spoonful of carraway seed or dill water. For children above two years, it must always be given with some other aperient; thus it may be combined with castor oil by the medium of mucilage or the yolk of an egg; in fact, it might be substituted for the white sugar in the previous prescription for castor oil.

MAGNESIA AND RHUBARB. — *Magnesia,* besides being a laxative, allays irritability of the stomach; it is consequently useful during dentition, at which period there is both much irritability and a prevailing acescency of the stomach. *The dose* is from five grains to ten for an infant, increasing the quantity to fifteen grains or twenty to children of nine or ten years of age. When taken alone the best vehicle is hot milk, which greatly quickens its aperient operation. And whenever the bowels are distended with wind, the pure magnesia is preferable to the carbonate. It is well to mention here, that when the infant throws up the nurse's milk it is generally curdled; a fact which leads the inexperienced mother to

infer that the child is suffering from acidity; and to counteract the supposed evil magnesia is given again and again. This is a useless and pernicious practice, for curdling or coagulation of the milk always takes place in the stomach, and is produced by the gastric juice, and is so far from being a morbid process, that milk cannot be properly digested without it.

Rhubarb, it should always be recollected, has an astringent as well as purgative property, according to the extent of the dose in which it is administered; the former of which never opposes or interferes with the energy of the latter, since it only takes effect when the substance is administered in small doses, or, if given in larger ones, not until it has ceased to operate as a cathartic. This latter circumstance renders it particularly eligible in mild cases of diarrhœa, as it evacuates the offending matter before it operates as an astringent upon the bowels.

As a purgative it operates mildly, and may be given to the youngest infant; if from two to twelve months old, from three to six grains; for children above that age, the dose may range from ten grains to twenty. Its operation, however, is much quickened by the addition of magnesia; both of which are more effective when thus united than when given separately. The following form, in a costive and flatulent state of the bowels, will

be found useful; a tea-spoonful or more may be given every three or four hours until the desired effect is obtained: — Take of

Powdered rhubarb, half a drachm;
Magnesia, two scruples;
Compound spirits of ammonia, twenty drops;
Dill water, two ounces;
Simple syrup, two drachms.

PURGATIVE BISCUITS. — For years, in some families, aperient medicine, when occasionally required, has been exhibited in this form. There can be no objection to this, if it lessen the child's *misery* in physic taking; but these biscuits must be carefully made and carefully used. The Montpellier Hospital has the following formula, which, as its purgative quality is *jalap*, should not be given to very young children; it is extracted from the work of Drs. Maunsell and Evanson: —

"Take an ounce of flour, and an ounce of sugar, two eggs, and one drachm of powder of jalap; let thin biscuits be made, a quarter of one of which will contain five grains of jalap; and may be taken once or twice a day, according to the effect."

The following form for *castor-oil biscuits*, which have been used for many years in one or more families, may also be occasionally resorted to: —

Take a quarter of a pound of flour, two ounces of moist sugar, a small quantity of mixed spice finely powdered, and with an ounce and a half of castor oil, make the whole into the consistency of pie-crust; to which may be added a few currants. After rolling out the paste, divide into ten cakes, and bake over a quick

oven. Each cake will contain rather more than a teaspoonful of oil, and one or more may be given according to the age of the child. The same may be made into gingerbread nuts by adding proper proportions of treacle and ground ginger.

THE LAVEMENT.—This is an excellent nursery remedy when the bowels are obstinately costive. It may then be employed as a substitute for medicine, a protracted and frequent use of which (even of the mildest aperients) is apt to injure the digestive functions, and to give rise to some degree of intestinal irritation. Lavements, however, like aperient medicine, must not be resorted to for a long time together; for whilst the latter irritate, the former most certainly tend, after a long continued use, to debilitate the bowels, and thus render them less than ever disposed to act for themselves. They are an excellent *occasional* remedy.

The simplest form of an aperient enema is warm water; but barley-water, or thin gruel, or even milk and water, are to be preferred at all times, as they are of a more bland and less irritating nature. If it be desirable to increase the strength of the injection, castor oil may be added. The proportions of fluid which are necessary for the different stages of life, under ordinary circumstances, may be stated as follows:—An infant at its birth requires about one fluid ounce; a child between the age of one and five years, from

three to four fluid ounces; and a youth of ten or fifteen, from six to eight fluid ounces.

The mode of administering an injection to an infant deserves particular attention, as injury might be caused by its being performed in a careless or unskilful manner. A gum elastic pipe should be always used instead of the hard ivory tube. Having smeared this over with lard, and placed the infant on its left side, with its knees bent up in the lap of the nurse, it is to be passed a couple of inches into the bowel, in a direction not parallel to the axis of the body, but rather inclined to the left. The latter circumstance should never be neglected, for if not attended to, there will be difficulty in administering the injection. The fluid must then be propelled very gradually, or it will be instantly rejected; on the whole being thrown up (the pipe carefully and slowly withdrawn), the child must be kept quietly reposing on its nurse's lap, and in the same posture for some little time.

THE APERIENT LINIMENT. — A liniment to be rubbed on the stomach is another resource in cases of habitual costiveness, and will frequently be attended with great success when repeated purgatives have been resisted.

Olive or castor oil may be used for this purpose; they must be warmed and rubbed over the

abdomen night and morning, for five or ten minutes. Perhaps the best form of liniment that can be made use of is the following: —

Compound soap liniment, one ounce;
Compound tincture of aloes, half an ounce.

SECT. II. — CALOMEL.

Calomel is one of the most useful medicines we possess; but though powerful for good, it is by no means powerless for mischief, and pages might be written upon the evil effects which have resulted from its indiscriminate use in the nursery; medical men are daily and hourly witnessing this fact. It is particularly eligible in the diseases of children; but then it is quite impossible for unprofessional persons to judge when it may be appropriately exhibited. And it cannot be too generally known, that the effect of this medicine upon the evacuations is always to make them appear unnatural. From ignorance of this fact, calomel is often repeated again and again to relieve that very condition which it has itself produced, causing but too frequently a degree of irritation in the delicate lining membrane of the bowel, which it may be very difficult for a medical man to remove, and perhaps a source of misery to the child as long as it lives. Its fre-

quent exhibition has also another evil attending it, for "the immoderate use of mercury in early infancy produces more, perhaps, than any other similar cause, that universal tendency to decay, which, in many instances, destroys almost every tooth at an early age."

In the diseases of childhood it is often administered by the mother or nurse with a degree of careless excess which ultimately, if not immediately, produces severe and irremediable injury. I have met with such cases; but Mr. Bell details a remarkable instance in point: "A child, about three years of age, was brought to me, having a most extensive ulceration in the gum of the lower jaw, by which the alveolar process (that portion of the jaw which forms the sockets of the teeth) was partially denuded. The account given by the mother was, that the child had some time previously been the subject of measles, for which a chemist, whom she consulted, gave her *white powders*, one of which was ordered to be taken every *four hours*. It appears by the result, that this must have been calomel; for, after taking it for two or three days, profuse salivation was produced, with swollen tongue, inflamed gums, &c., followed by ulceration of the gum, lips, and cheek. On examining the denuded alveolar process, I found that a considerable necrosis (death of the bone) had taken place, including the whole

anterior arch of the jaw from the first double tooth on the left side to the eye-tooth on the right. By degrees the dead portion of bone was raised, and became loose, when I found that the mischief was not confined to the alveolar process, but comprised the whole substance of the bone within the space just mentioned," &c. Surely the knowledge of such a case as this would induce every prudent mother to *exclude calomel from her list of domestic nursery medicines.*

SECT. III. — OPIATES.

This class of medicine is often kept in the nursery, in the forms of laudanum, syrup of white poppies, Dalby's carminative, and Godfrey's cordial. The object with which they are generally given is to allay pain by producing sleep; they are, therefore, *remedies of great convenience to the nurse;* and I am sorry to be obliged to add, that, so exhibited, they are but *too often fatal to the little patient.* The fact is, that in the hands of the physician, there is no medicine the administration of which requires greater caution and jndgment than opiates, both from the susceptibility of infants to their narcotic influence, and their varying capability of bearing it; the danger, therefore, with which their use is fraught in the hands of a.

nurse should for ever exclude them from the list of domestic nursery medicines.

Dalby's carminative and Godfrey's cordial are, perhaps, more frequently used than any other forms; and some striking cases, illustrative of the fatal results of exhibiting them indiscriminately, and without medical sanction, are on record.* The late Dr. Clark, in his "Commentaries," mentions a case which he saw, where "*forty drops of Dalby's carminative* destroyed an infant." Dr. Merriman gives the following in a note in Underwood, "On the Diseases of Children:"—

"A woman, living near Fitzroy Square, thinking her child not quite well, gave it a dose of Godfrey's cordial, which she purchased at a chemist's in the neighbourhood. In a very short time after taking it the child fell into convulsions, and soon died. In less than a month the child of another woman in the same house was found to be ill with disordered bowels. The first woman, not at all suspecting that the Godfrey's cordial had produced the convulsions in her infant, persuaded her friend to give the same medicine to her child. A dose from the same bottle was given, and this child was likewise attacked almost immediately with convulsions, and also died."

Convulsions and epilepsy, without such fatal

* Two or three fatal cases, and upon which coroners' inquests were held, have occurred within the last two years.

results as the foregoing, are not uncommon as the effect of a single dose of an opiate given unadvisedly; and by their continued and habitual use (and the form of syrup of poppies is but too often administered by an indiscreet and lazy nurse, unknown by the parent), a low, irritative, febrile state is produced, gradually followed by loss of flesh, the countenance becoming pallid, sallow, and sunken, the eyes red and swollen, and the expression stupid and heavy, and the powers of the constitution at last becoming completely undermined. Such an object is to be seen daily among the poorer classes, — the miniature of a sickly aged person: death soon follows here.

SECT. IV. — LEECHES.

Leeches should never be employed unless ordered by the medical attendant; and when used, never let the young child see them: it can be easily prevented; and, as the sight of them generally gives alarm, it should be avoided. When applied to the chest for any inflammatory attack, expose as little of the surface during the time the leeches are drawing as possible, lest fresh cold be given.

THE MODE OF APPLYING THEM.—First, wash the part and dry it thoroughly. Then the readiest mode of applying the leeches is to take off the lid of the chip box in which they are sent, placing the mouth of the box on the part to which they are to be applied. Keep it steadily there for ten minutes, and then lift up the edge, and you will generally find that the leeches have taken. Next separate their tails from the bottom of the box, and so remove it. If the leeches take well, at the expiration of twenty minutes or half an hour they will drop off, filled, having done their duty, with the exception, perhaps, of a solitary one still adhering, but idle. This should be at once separated, not by forcibly detaching it, but by means of a little salt put on its head. It is a great mistake to allow a single leech to remain on for an hour or more after the others have dropped off, doing nothing, while it wearies and exhausts the child. The leech-bites are now to be sponged with warm water, or a bread and water poultice applied, as may have been directed by the medical attendant. In children, however, a poultice is seldom ordered; and so having been sponged for ten minutes, a pledget of lint is to be placed over the part, and steady pressure made upon it, and kept up by the ends of the fingers for five or ten minutes, and subsequently by means of a bandage or otherwise — being always most careful not in

any degree to disturb the lint. In general this quickly puts a stop to the bleeding.

THE MODE OF ARRESTING THE BLEEDING. — Difficulty sometimes arises in putting a stop to the bleeding from leech-bites; a matter of considerable importance in the case of a delicate infant. And in order to prevent the serious consequences that sometimes happen from this source to children, the bleeding should always be stopped before the patient is left for the night. Again, it is always prudent to apply them only over some bone, so that pressure may be effectually applied. The following measures may be resorted to for arresting the bleeding when necessary: —

1. Expose the surface of the part to the external air, so that a coagulum of blood may form at the orifice: this simple mode will frequently arrest it.

2. If this fail, make compression upon the part: this is one of the most effectual means of restraining hæmorrhage. It is to be effected by placing a small portion of scraped lint over each leech-bite, and pressing on them with the points of the fingers (previously greased with cold cream that they may not, when taken away, disturb the lint) for five or ten minutes.

3. If the compression fails in stopping the bleeding, or from the situation of the leech-bites

it cannot be adopted, because there is no firm point of resistance upon which to make pressure, the part may be dusted with starch or gum arabic powder, or, if this is of no avail, the wound may be touched with lunar caustic.

If none of these measures are successful, the assistance of the medical attendant must be obtained; and if firm pressure be made upon the part, no serious loss of blood can ensue before his arrival.

Leeches should never be resorted to by a parent for any of the diseases of infancy, without medical direction.

SECT. V. — BLISTERS.

A blister should never be applied for any infantile disease, except when ordered by a medical man, as its injudicious use might greatly aggravate the complaint.

There are also *one or two precautions* in reference to *the mode of the application* of a blister, which it is always right for a parent to attend to. A blister should never be applied to any part where the skin is excoriated or broken; and from the great irritability of the skin of a child, it should never be allowed to remain on longer than from two to four hours. At the expiration of this

time, the surface will usually become red and inflamed; and, if the blister is removed, and the part dressed with fresh spermaceti ointment spread on lint, or with a soft bread and water poultice, a full blister will soon be raised: the little patient is thus saved much suffering, and a very troublesome sore prevented. A piece of tissue or silver paper, previously moistened with almond oil, interposed between the blister and the skin, will answer the same purpose; the blister will act well, and the evils before alluded to will be prevented.

After a blister has been on two or three hours its edge should always be carefully raised, to ascertain the effect produced; and if the surface be much inflamed, more particularly if little points of vesication (watery bladders) are present, it should be removed. If the medical attendant has not ordered the blister to be kept open, the little bladder or bladders are now to be slightly snipped with the points of a sharp pair of scissors, the fluid let out, and the part dressed with a piece of lint (previously spread with spermaceti ointment) the exact size of the blistered surface. But if it is intended to keep up a discharge from the part, the cuticle must first be removed to a greater or less extent, according to previous directions, and then dressed with the ointment ordered.

SECT. VI. — POULTICES.

BREAD AND WATER POULTICE. — Although this is one of the commonest applications in use, it is rarely well made or properly applied. It thus becomes injurious rather than useful; adding to the inflammation or irritation of the part, instead of soothing and allaying it. Nothing, however, is more simple than the mode of its preparation. Cut slices of stale bread of sufficient quantity, scald out a basin, put the bread into it, pour upon it boiling water, cover it over, and let it remain for ten minutes; next stir the bread about in the water, or if necessary, chop it a little with the edge of the knife, and drain off the water by holding the knife on the top of the basin, but do not press the bread, as is usually done; then take it out lightly, and spread it upon some soft linen so that it shall be in thickness half an inch, and of a size large enough to cover the whole of the inflamed part, and a little more. Apply it just warm enough to be borne, and cover it well with oiled silk. A poultice thus made will act as a local tepid bath to the inflamed part; and the oiled silk preventing evaporation, it will be found, when taken off, as moist as the first moment that it was put on.

LINSEED MEAL POULTICE. — This is seldom made properly; the late Mr. Abernethy thus described how it ought to be made: — "Scald your basin," he says, "by pouring a little hot water into it, then put a small quantity of finely-ground linseed meal into the basin, pour a little hot water on it, and stir it round briskly until you have well incorporated them; add a little more meal and a little more water, then stir it again. Do not let any lumps remain in the basin, but stir the poultice well, and do not be sparing of your trouble. If properly made, it is so well worked together that you might throw it up to the ceiling, and it would come down again without falling in pieces; it is, in fact, like a pancake. What you do next, is to take as much of it out of the basin as you may require, lay it on a piece of soft linen, let it be about a quarter of an inch thick, and so wide that it may cover the whole of the inflamed part."

MUSTARD POULTICE. — This is an invaluable application in some of the diseases of infancy and childhood, and therefore frequently ordered. It is made as follows: — First mix two-thirds of mustard flour and one-third of wheaten flour, as much as you will require for your poultice. Then scald out a basin with boiling water, — into this put your mixture of mustard and wheaten

flour, pour a little hot water on it, stir it round, and add water sufficient to make it the consistence of thick paste. Then spread on soft linen about a quarter of an inch thick, the size ordered, and apply next the skin. The time it is to be kept on will depend upon the individual sensibility of the skin of the child; but in general, from fifteen to twenty minutes will be found amply sufficient. This application must at all times be carefully watched; for if it remain on too long, ulceration and even death of the part might ensue; therefore, directly the skin is found tolerably red, the poultice should be removed. After its removal, a soft piece of linen is to be put over the part, and if very painful it may be dressed with spermaceti ointment.

SECT. VII. — BATHS.

Baths are much resorted to during infancy and childhood, both in health and in disease. In the former state, they constitute an important measure of hygeiene (this has been briefly alluded to under the section "Bathing"), and in the latter, a valuable remedial agent. Their indiscriminate use, however, might be followed by serious consequences; it is therefore important to point out a few rules for their judicious employment.

COLD WATER PLUNGE BATH.—It consists of water in its natural degree of heat; its temperature varying, according to the season of the year or other circumstances, from 30° to 60°.

The phenomena produced upon a strong and healthy boy plunging into this bath will be as follows:—He will first experience a sensation of cold, followed by slight shuddering, and, if the immersion has been sudden, a peculiar impression on the nervous system, called a shock. Almost immediately after the shock, the feeling of cold will vanish, and give place to a sensation of warmth, speedily diffusing itself over the whole frame. If the boy leaves the bath at this time, or, at all events, before the warmth of the body goes off, and quickly dresses himself, a renewal of the reaction which had followed the shock of immersion will be experienced; he will be in a most delightful glow,—there will be a general feeling of enjoyment, accompanied by a sensible increase of animal power, and invigoration of the whole system. But, on the other hand, if the boy greatly prolong his stay in the water, no reaction will ensue, and he will become chilly, which will gradually increase to a strong and general shivering;—his feet and legs will become benumbed, and the whole body will soon be languid, exhausted, and powerless. The same result will happen to the young and delicate

infant, if plunged into this bath; the same sensations will be produced; except that here the shock is scarcely followed by any reaction, and therefore from the first moment of the immersion, the shivering and consequent train of sensations occur. This arises from the infant at birth having less power of producing heat than when further advanced in age.

From the foregoing remarks, then, it will be seen, that, *in early infancy*, the cold bath is inadmissible, and water of a higher temperature than that which feels cool to the hand of the nurse should always be used at this age. But that, as the child grows older, — if of a healthy and vigorous constitution, — the cold bath is unquestionably most desirable; and, if used in a proper manner, will be found to act as a most powerful tonic to the system. The summer is of course the only period of the year when the cold plunging bath can be resorted to for the child.

SEA BATHING. — When sea bathing can be obtained, it is even more conducive to the health of the child than the fresh water plunge bath; for the sea-water is more tonic, stimulant, and bracing, than fresh. The period of the year best adapted for sea bathing is the summer and autumn. The best time of the day for bathing is two or three hours after breakfast; except in very

hot weather, when an earlier hour must be chosen. Exercise is always useful previously to the bath; but it must be gentle, so as not to induce fatigue or much perspiration. Then the bath must be entered suddenly, with a plunge, inasmuch as an instantaneous immersion produces a greater reaction than a gradual immersion. It is a matter of importance, however, in bathing children, that they should not be terrified by the immersion, and every precaution should be taken to prevent this. The length of time of remaining in will depend upon circumstances. One dip only is enough at the first bath. Subsequently the time of remaining in the water may be prolonged, but this must be increased gradually; the positive necessity of leaving the bath while there still remains sufficient power of reaction being always kept in mind. Exercise in the water, particularly that of swimming, is highly useful. The body should be speedily and well dried, immediately upon coming out; a rough jack towel is an excellent means of accomplishing this purpose, while at the same time it insures considerable friction of the surface of the skin. If the boy is in sound health, he may bathe daily.

As a remedy, sea bathing is highly serviceable. Its employment, however, requires much caution, and great mischief is sometimes committed by its indiscriminate use.

The child of a strumous habit may be greatly benefited by sea bathing, united with a few years' residence on the coast. Indeed, by carefully following up a course of sea bathing, a suitable diet, and a judicious mode of living, the very temperament of the individual may be all but changed, and a power of activity imparted to the system, productive eventually of comparatively strong and robust health. A parent will do wisely, therefore, to send a child of such a habit to a school on the coast. Great caution, however, must be observed when bathing is commenecd, lest the shock be too powerful for the energies of the system, and be not followed by the necessary degree of reaction. It will be prudent to begin with the tepid bath (85° to 92°), and gradually reduce the temperature until the open sea can be resorted to without fear. The measures already mentioned for promoting reaction — exercise previous to immersion; the immersion at first only momentary, and followed by strong friction — must be diligently regarded in such a case.

In the child of a delicate and feeble habit, much out of health, whose general debility is dependent on some organic disease, sea bathing is not only improper, but dangerous. Instead of being strengthened, such a child will be rendered more weak and debilitated. On the other hand, when the child is of a weak and relaxed habit, but free

from organic disease, the cold bath will be highly useful, provided sufficient power of reaction exist in the system. In this case the skin and flesh of the child is relaxed and flabby; there is a great tendency to warm perspirations in bed, capricious appetite, confined or relaxed bowels, indisposition to exertion, and weariness from the slightest effort.

SHOWER BATH. — The effects of the shower bath are, on the whole, similar to those of the plunge bath of the same degree of temperature except that the immediate shock of the shower bath is in general felt to be greater than that from simple immersion. This, however, may be met by putting warm water into the bottom of the bath in sufficient quantity to cover the ankles of the individual taking the bath, which tends at once to lessen the shock, and to increase the reaction.

The apprehension and alarm experienced by young children in entering this kind of bath is easily overcome, by using at first a modification of it lately brought into use. It consists of a tin vessel in the form of a large bottle, pierced at the bottom like a colander, and terminating in the upper part in a narrow tube, with an open mouth. When put into water it becomes filled, which is retained by closing the mouth of the tube with the finger; on removing which the

water flows gradually out of the sieve-like bottom in a gentle shower. This may be used to the youngest child. At first the quantity of water employed should be small, and its temperature warm; as, however, the child grows older and accustomed to the bath, the former may be increased, and the latter lowered. Its tonic effect may be augmented by the addition of bay salt, and by much active rubbing.

As the child gets older the common form of shower bath may be used, and throughout the year, if he enjoy robust health; during the winter season, however, the water should be made tepid. This bath should be taken immediately upon rising from bed. A warm sheet to throw round the person of the child directly he comes out of the bath is always desirable in the winter months.

ABLUTION, OR SPONGING. — By ablution is meant the process of applying water to the surface of the body by means of a sponge or towel. It is one of the best substitutes for the cold bath; and if done quickly and thoroughly, produces a glow and invigoration of frame almost equal to the former. It is also the surest preventive against catching cold.

Every child in health ought to be obliged, every morning of its life (when other means of

bathing cannot be obtained), upon rising, and while the body still retains all the warmth of the bed, to sponge the whole body. If too young to do it for himself, it must be done for him. Salt or vinegar should be added to the water; and if the boy be robust, cold water may be used throughout the year; if not, in the winter season it must be made tepid.

As a remedy, cold water sponging, and the application of ice and iced water, are often ordered under certain states of disease by the medical attendant, aud frequently followed by delightful results. But it is necessary that they should be properly applied to do good.

Cold water sponging is a convenient and grateful method of moderating febrile heat of the surface, provided undoubted powers of reaction be present in the system. It is frequently ordered, therefore, to be employed in eruptive fevers, as measles, scarlet fever, small-pox, and other fevers; and also in some local inflammations, particularly of the brain. Vinegar may be added to the water under these circumstances with advantage. It should at first be used tepid or cool, but afterwards cold. As a general rule, the more dry and parched the heat of the surface, the more urgent the necessity for the application of the cold, and the more frequently and fearlessly ought it to be renewed, — every hour or half-hour not

being too often. Should the child fall asleep during the process, and begin to perspire, it must be intermitted, but resumed again on a recurrence of the parching heat.

Ice and iced water are most frequently employed in affections of the brain. The former is most conveniently applied in a well-cleaned pig's bladder, which should be half filled with broken fragments of the ice. The bladder prevents moisture about the clothes, and, from its smooth and pliant nature, readily accommodates itself to every part of the child's head. If iced water is used, care must be taken that the cloths are sufficiently large to cover the whole of the head, and they should be doubled to prevent their getting rapidly warm. Indeed, in applying cold locally, as in inflammation of the brain, one rule it is of the utmost importance to observe, viz. that the application of the cold shall be continuous; therefore a second set of cold cloths or bags of ice should be applied before the former has become warm. This plan, especially pursued during the night, along with judicious internal treatment, will save many children from perishing under the most insidious and fatal disease of childhood—water on the brain.

If neither water of a sufficiently low temperature, nor ice, can be procured, then recourse

may be had to refrigerating mixtures, of which the following is a good form: —

Common water, five pints;
Vinegar, two pints;
Nitre, eight ounces;
Sal ammoniac, four ounces.

WARM BATH. — The warm bath judiciously prescribed is one of the most valuable remedial agents we possess, and the means for promptly administering it should always be at hand; but although powerful for good, when misapplied, it is equally powerful for mischief. For instance, in active inflammatory affections, before the loss of blood, the use of the warm bath would greatly aggravate the disease; and yet, for an infant with active inflammation of the respiratory organs, it is continually resorted to. Again, nothing is more common than for a child, when attacked with convulsions, to be put immediately in the warm bath; and, generally speaking, it is extremely beneficial in this class of diseases; but it is sometimes no less prejudicial, when applied without due examination of the peculiarities of individual cases. For in plethoric and gross children, the local abstraction of blood from the head, and the complete unloading of the alimentary canal, are often necessary to render such a measure beneficial, or even free from danger. In convulsions, however, and particularly when aris-

ing from teething, a parent may, without hesitation, at any time immerse the *feet* of the infant in water as warm as can be borne, at the same time that cloths wet with cold water are applied to the head and temples.

As a preventive, where there is a tendency to disease, the warm bath may be employed without scruple, and will be found most serviceable. Its value in this point of view is very great, and it is to be regretted that it is not sufficiently appreciated and used. For example, a severe cold has been taken, and inflammation of the air-tubes is threatened: only put the child into a warm bath, and, with the common domestic remedies, a very serious attack may be warded off. Again, in the commencement of a diarrhœa, a warm bath, and discontinuing the cause of the attack, will alone suffice to cure; and, moreover, in the protracted diarrhœa attendant upon teething, where, after various remedies have been tried in vain, the child has lost flesh and strength to an apparently hopeless degree, recovery has been brought about by the simple use of the warm bath.

In the treatment of scrofulous children, warm and tepid bathing is of great value. In such cases, a course of warm sea bathing, with active friction over the whole surface after each bath, will at once relieve that abdominal fulness which is generally present, improve the functions of the

skin, and give tone and vigour to the whole system. Towards the termination of such a course of baths, their temperature must be gradually reduced till they become tepid (85° to 92°).

The opinion that warm baths generally relax is erroneous: they are, no doubt, debilitating when used by persons of a weak and relaxed constitution, or when continued too long; but, on the contrary, they invariably give tone when employed in the cases to which they are properly applicable.

There are certain *rules for the use of the warm bath*, which should be invariably acted up to. Their neglect might be followed by serious consequences.

Temperature of the water.—When the warm bath is used as a measure of hygeiene, as a general rule, any degree of temperature may be chosen between 92° and 98°, which appears to be most agreeable to the child; but on no account must 98° be exceeded. When ordered as a remedial measure, the temperature will of course be fixed by the medical attendant.

The same degree of temperature must be kept up during the whole period of immersion. For this purpose the thermometer must be kept in the bath, and additions of warm water made as the temperature is found to decrease. These additions of warm water, however, must be regulated by

the indications of the thermometer, and not by the feelings of the child.

Period of remaining in the bath. — This must depend upon circumstances. As *a measure of hygeiene*, it must be varied according to the age of the child. For the first four or five weeks, the infant should not be kept in beyond three or four minutes; and the duration must afterwards be gradually prolonged as the child advances in age, until it extends to a quarter of an hour, — a period which may be allowed after it has attained the age of four years.

When the bath is employed as *a remedial agent*, the time of immersion must be prolonged; this will be determined by the medical adviser. Speaking generally, a quarter of an hour may be said to be the shortest period, an hour the longest, and half an hour the medium.

When in the bath, care must be taken that the child's body is immersed up to the shoulders or neck, otherwise that part of the body which is out of the bath (the shoulders, arms, and chest), being exposed to the cooler temperature of the air, will be chilled.

When the infant or child is taken out of the bath, the general surface, especially the feet, must be carefully rubbed dry with towels previously warmed; and when one of the objects of the bath is to excite much perspiration, the child should

be immediately wrapped in flannel and put to bed. When, however, the object is not to excite perspiration, the child may be dressed in his ordinary clothing, but should not be allowed to expose himself to the open air for at least an hour.

Time of using the bath. — When resorted to for sudden illness, the bath must of course be employed at any time needed. When used for any complaint of long standing, or as a measure of hygeiene, as a general rule, it should be taken between breakfast and dinner, about two hours after the former, or an hour and a half before the latter. This implies that an infant should never be put into the bath after having been freely nourished at the breast. Neither should it ever be used when the child is in a state of free perspiration from exercise, or on awaking from sleep.

FOOT-BATH. — A partial warm bath, such as the foot-bath, is one of the safest and most frequently employed in the nursery. It is of much service in warding off many complaints. If a child get the feet wet, plunging them into warm water will often prevent any ill consequences; and even when the first chill and slight shiverings which usher in disease have been complained of, the disorder may sometimes be cut short by the use of a foot bath, continued till free perspiration occurs.

It is frequently ordered during teething, and in affections of the head. In these cases the intention is not merely to produce a gentle and general perspiration, but it is more particularly used to draw the blood from the head and body to the feet. The temperature of the water should be raised as high as can be borne, and it must be kept up by the occasional addition of fresh hot water. The vessel employed should be deep enough to permit the water to reach the knees, and a blanket must be thrown around the little patient and the bath. After the child has remained in from ten minutes to a quarter of an hour, the feet and legs must be rubbed perfectly dry, woollen stockings drawn on, and the child put into a warm bed.

A mustard foot-bath is made by the addition of a table-spoonful of mustard flour to every gallon of water. In convulsions excited by difficult teething, this bath is most useful, and may always be resorted to without fear by the mother. Its good effects will be much enhanced if, at the same time, a piece of flannel wet with cold water is applied over the head and temples, or cold water may be sprinkled on the face.

SECT. VIII. — VACCINATION.

There are several circumstances connected with vaccination, namely, the age and condition of the child upon whom it is to be performed, — the progress in appearance of the vaccine vesicle, — and the maternal management of the child during the process, with which a parent ought to be more or less acquainted. The application of this remedy ever requires care and judgment, and for want of these it has frequently failed to confer the inestimable benefits it possesses, particularly in the hands of those charitable, but unprofessional individuals who are in the habit of gratuitously vaccinating the poor in remote districts in which they live, and where medical aid can only with difficulty be obtained. A desire to remedy this evil, in however slight degree, induces me to give a few hints upon the subject; and if these observations do no more than excite a greater attention to the subject, they will do some good.*

* The following extract from the Report of the National Vaccine Establishment (dated 1839), points out the causes of failure, and at the same time shows that there is no real ground for any loss of confidence in the protective power of cow-pox. It is signed by four of the medical officers. "We are convinced that the indiscriminate vaccination which has been practised in this country by ignorant and unqualified persons, with but little or no regard to the condition of body of the person to be vaccinated, to the selection of the vaccine lymph, or to the progress

The most favourable time for vaccinating an infant is between the age of six weeks and four months; a period that is prior to the irritation of teething, and also subsequent to the extreme irritability of first infancy. Should, however, small-pox be very prevalent, and in the near neighbourhood, rather than expose the infant to its contagious influence, it should be vaccinated at once. There will be but little risk in this measure, even if resorted to immediately after its birth.

The child, when operated upon, should be as far as possible in perfect health. If disease be present in the system—if it be the period of dentition — if the bowels are at all disordered, or if there be any eruption on the surface of the body, vaccination should be postponed, unless from the pressure of some extreme necessity. And again, if it be positively necessary from circumstances to vaccinate during the presence of a chronic eruption, there is no objection to this; for it is not unlikely that it will be benefited by the introduction of the vaccine disease; but on some future occasion the vaccination ought to be repeated in order to test the efficiency of the former trial.

and character of the vesicle to be formed, are to be regarded amongst the main causes of the occasional failure of vaccination. We have the opportunity of bearing our most ample testimony to the continuance of the efficiency of the original vaccine lymph introduced by Dr. Jenner, through nearly a million of subjects successively, of whom many thousands have been exposed with entire impunity to small-pox in its most malignant form."

The vaccine matter to be employed must be what is called active virus, or it will be of no use: that is to say, it must be taken from a vesicle before a certain date after vaccination; namely, between the fifth and eighth day. The health and constitution of the child, too, from whence the virus is taken, should always be carefully regarded. A child in perfect health, with no cutaneous affection or vicious constitutional taint, is the only subject from whom it ought ever to be propagated.

When the vaccination has been successfully performed upon a healthy infant, the puncture on the second day may be felt elevated. On the third or fourth a small red pimple is to be seen, and if examined with a magnifying glass, surrounded by a slight efflorescence. On the fifth day a distinct vesicle becomes apparent to the eye, circular in form, having an elevated edge and depressed centre. On the eighth day it appears distended with a clear lymph, is either pearl coloured or slightly yellow, and is at its greatest perfection.

On the evening of this day *an inflamed ring* begins to form around the base of the vesicle, which continues to increase during the two following days; it is circular in form, and its diameter extends from one to three inches. It is at its height on the tenth day, when there is con-

siderable hardness and swelling of the subjacent parts; on the eleventh day it begins to fade, generally from the centre to the circumference, sometimes forming two or three concentric rings of a bluish tinge.

After the tenth day the vesicle itself begins to decline, the centre first turns brown, and the whole is gradually converted into a hard round scab of a dark mahogany colour. About the twenty-first day this crust falls off, leaving a permanent circular cicatrix, somewhat depressed, and marked with six or eight minute pits.

Such is the course of a true vaccine vesicle; and if there be a shadow of a doubt that the vaccination is defective in any one of the above points, especially if the inflamed ring do not appear, the operation should be performed again.

Some children pass through the disorder without the slightest indication of constitutional disturbance, which is not to be looked upon as by any means essential to the success of the vaccine process. If the constitutional symptoms manifest themselves, it will be about the seventh or eighth day; the infant will be restless and hot, and the bowels more or less disordered. It is not an uncommon circumstance to find about the tenth day an eruption, showing itself on the extremities of the child, sometimes extending to the trunk of the body. It continues for three or four days; occa-

sionally until after the vaccine scab has fallen off. This eruption is chiefly met with in children of full habits, in whom numerous vesicles have been raised, which discharge freely.

Internal treatment is rarely required during vaccination, except now and then a mild aperient, such as a tea-spoonful of castor oil. Febrile symptoms, however, sometimes manifest themselves, when it becomes necessary. The chief thing to be attended to in the management is to protect the vesicles, as they enlarge, from injury, particularly from the sixth or seventh day. If, unfortunately, from friction or other cause, the inflammation and swelling around the pustule should become severe, cold water, or a weak solution of Goulard's extract, or a bread and water poultice must be applied.

Every effort to communicate the vaccine disease will now and then fail; the child will not take the vaccination. When a case of this kind is met with, after a fair number of trials with fresh and active virus, the little patient should be left for a few months in the hope that some change may take place in the system, and then another trial be instituted.

Experience has long proved that the predisposition to receive cow-pox is not equally great in all persons, nor at all times; and that in some individuals there exists through life an insuscepti-

bility to the vaccine disease. The child of a weak and unhealthy constitution will not unfrequently be found indisposed to take the vaccination, but in this case the inaptitude is temporary; whilst on the other hand, when this indisposition is met with in a healthy and robust condition of body, it will most probably last through life. Happily, however, experience has further shown that in most of these instances the individual is equally insusceptible of the small-pox disease.

CHAPTER IV.

OF TEETHING, AND HINTS ON THE PERMANENT OR ADULT TEETH.

THE infant at birth has no teeth visible; the mouth is toothless. It possesses, however, hidden in the jaw, the rudiments of two sets; the first of these which make their appearance are called the *temporary* or *milk teeth;* the second, the *permanent* or *adult teeth,* and these come up as the former fall out, and so gradually replace them.

SECT. I. — OF TEETHING.

The first set of teeth, or milk-teeth as they are called, are twenty in number; they usually appear in pairs, and those of the lower jaw generally precede the corresponding ones of the upper. The first of the milk-teeth is generally cut about the sixth or seventh month, and the last of the set at various periods, from the twentieth to the thirtieth months. Thus the whole period occupied by the first dentition may be estimated at

from a year and a half to two years. The process varies, however, in different individuals, both as to its whole duration, and as to the periods and order in which the teeth make their appearance. It is unnecessary, however, to add more upon this point.

Their development is a natural process. It is too frequently, however, rendered a painful and difficult one, by errors in the management of the regimen and health of the infant, previously to the coming of the teeth, and during the process itself.

Thus, chiefly in consequence of injudicious management, it is made the most critical period of childhood. Not that I believe the extent of mortality fairly traceable to it, is by any means so great as has been stated; for it is rated as high as one sixth of all the children who undergo it. Still, no one doubts that first dentition is frequently a period of great danger to the infant. It therefore becomes a very important question to an anxious and affectionate mother, how the dangers and difficulties of teething can in any degree be diminished, or, if possible, altogether prevented. A few hints upon this subject, then, may be useful. I shall consider, first, the management of the infant, when teething is accomplished without difficulty;—and, secondly, the management of the infant when it is attended with difficulty.

1. *The management of the infant when teething is without difficulty.*—In the child of a healthy constitution, which has been properly, that is, naturally fed, upon the milk of its mother alone, the symptoms attending teething will be of the mildest kind, and the management of the infant most simple and easy.

Symptoms.—The symptoms of natural dentition (which this may be fairly called) are, an increased flow of saliva, with swelling and heat of the gums, and occasionally flushing of the cheeks. The child frequently thrusts its fingers, or any thing within its grasp, into its mouth. Its thirst is increased, and it takes the breast more frequently, though, from the tender state of the gums, for shorter periods than usual. It is fretful and restless; and sudden fits of crying and occasional starting from sleep, with a slight tendency to vomiting, and even looseness of the bowels, are not uncommon. Many of these symptoms often precede the appearance of the tooth by several weeks, and indicate that what is called "breeding the teeth" is going on. In such cases, the symptoms disappear in a few days, to recur again when the tooth approaches the surface of the gum.

Treatment.—The management of the infant in this case is very simple, and seldom calls for the interference of the medical attendant. The

child ought to be much in the open air, and well exercised: the bowels should be kept freely open with castor oil; and be always gently relaxed at this time. Cold sponging employed daily, and the surface of the body rubbed dry with as rough a flannel as the delicate skin of the child will bear; friction being very useful. The breast should be given often, but not for long at a time; the thirst will thus be allayed, the gums kept moist and relaxed, and their irritation soothed, without the stomach being overloaded. The mother must also carefully attend, at this time, to *her* own health and diet, and avoid all stimulant food or drinks.

From the moment dentition begins, pressure on the gums will be found to be agreeable to the child, by numbing the sensibility and dulling the pain. For this purpose coral is usually employed, or a piece of orris-root, or scraped liquorice root; a flat ivory ring, however, is far safer and better, for there is no danger of its being thrust into the eyes or nose. Gentle friction of the gums, also, by the finger of the nurse, is pleasing to the infant; and, as it seems to have some effect in allaying irritation, may be freqently resorted to. In France, and in this country also, it is very much the practice to dip the liquorice-root, and other substances, into honey or powdered sugar-candy; and in Germany, a small bag, containing

a mixture of sugar and spices, is given to the infant to suck, whenever it is fretful and uneasy during teething. The constant use, however, of sweet and stimulating ingredients must do injury to the stomach, and renders their employment very objectionable.

2. *The management of the infant in difficult teething.* — In the child which has been partly or altogether brought up by hand, or who is of a feeble and delicate constitution, or imbued with any hereditary taint, the process of dentition will be attended with more or less difficulty, and not unfrequently with danger.

Symptoms. — The symptoms of difficult dentition are of much more aggravated description than those which attend the former case; and it is right that a mother should, to a certain extent, be acquainted with their character, that she may early request that medical aid, which, if judiciously applied, will mitigate, and generally quickly remove them.

Difficult dentition will be attended with painful inflamation and swelling of the gum, which is hotter, of a deeper red than natural, and intolerant of the slightest pressure. There is often great determination of blood to the head, which a mother may recognise by the cheeks being red, hot, and swollen; the eyes red, irritable and

watery; and the saliva running from the mouth profusely. The fever is great, and the thirst extreme. The child is at one time restless and irritable, and at another heavy and oppressed: the sleep will be broken, and the infant frequently awake suddenly and in alarm from its short slumbers. Such are the chief symptoms of difficult teething, and which will be present to a greater or less degree.

Treatment. — As most of the above symptoms are induced by the painful tension of the gum, it would seem that the most rational mode of attempting their relief is by freely lancing the swollen part. Great prejudices, however, still exist in the minds of some parents against this operation. They think it gives great pain, and if the tooth is not very near, makes its coming through the gum subsequently the more difficult.

With regard to the first objection, the lancet is carried through the gum so quickly, that this is hardly possible; and the fact that the infant will often smile in your face after it is done, although previously crying from pain, is sufficient evidence that it is not a very painful operation. In reference to the second, that the scar which ensues, opposes, by its hardness, the subsequent progress of the tooth, it is quite groundless; for cicatrices, like all other new-formed parts, are much more easily absorbed than

riginal structure.

Of the practical utility and perfect safety of this operation we have ample proof in its daily performance with impunity, and in the instant relief which it often affords to all the symptoms.

Mere scarifying the gums is sometimes all that is required, and will afford great relief. This operation, therefore, should not be opposed by the mother. She, at the same time, should be acquainted with its precise object, lest the speedy return of the symptoms, and the non-appearance of the expected tooth, might tend to bring the operation of lancing the gums into disrepute.

The parental management of the infant, then, and by which much of the pain and difficulty of teething may be removed or alleviated, consists in attending to the following directions: —

First, to the state of the mouth. — To this it is an important part of the mother's duty to pay especial attention; and, by so doing, she will save her child much suffering. The condition of the mouth should be carefully inspected from time to time; and should a swollen gum be discovered, it should immediately be attended to, not waiting till constitutional symptoms appear before she employs proper aid for her child. For this purpose the mother should make herself familiar with the appearances of the gum under distension and inflammation; a matter of no difficulty, accompanied,

as this condition usually is, by a profuse secretion of saliva, heat of mouth, and at a time when the age of the child justifies the supposition that it is about to cut its first tooth, or, if it have some teeth, that others are about to appear.

Secondly, to the food. — If a child is teething with difficulty, it should always have its quantity of nourishment diminished. If it is being fed, as well as nursed at the breast, at the time, the former should be immediately withheld: if it is being fed alone, the only kind of food that should be allowed is milk and water. These cases are much aggravated by the not uncommon habit of parents giving the infant food whenever it cries from the irritation attending upon the process; and thus a slightly difficult dentition is converted into serious disease.

Thirdly, to the state of the bowels. — These must be carefully watched, that they may not become confined; it being necessary that they should be gently relaxed at this time. If a slight diarrhœa is present, it must not be checked; if it pass beyond this, however, medicine must be had recourse to, and great benefit will also arise from putting the child into a warm *hip-bath*, and warmly clothing the body, but keeping the head cool.

Fourthly, to the head. — The infant's head should be washed with cold water night and

morning, and no other covering than that which nature has provided should be put upon it when within doors or asleep; and on no occasion should warm felt or velvet hats be worn during mild or warm weather, straw or white hats being much lighter and cooler. The child should be much in the open air.

The sponging of the infant's body daily, either with cold or tepid water, must depend upon the season of the year, and constitution of the child as well as upon other circumstances. Sponging the *head* with cold water night and morning is almost invariably attended with great benefit, and may be resorted to in every case without fear; and now and then the use of the warm hip-bath for several days together will be ordered by the physician, which, by acting upon the skin, diminishes the determination of blood to the head, and thus forms an important source of relief.

Fifthly, of convulsions. — If they should occur, and they are not unfrequently excited by difficult teething, and then give great alarm to the parent, relief will be afforded by immersing the hips, legs, and feet of the infant in water as warm as can be borne, and at the same time applying over the head and temples a piece of flannel wet with cold water. I have also often cut the fit short by sprinkling cold water in the child's face while in

the bath. The gums should always be looked to, and if they appear swollen and painful, at once lanced. I have known the most formidable convulsions to cease immediately after this operation.

Sixthly, of the use of opiates. — It is the practice with some nurses to administer narcotics to quiet infants while teething. It is not only objectionable, but, from the uncertain effects of sedatives upon infants, a very dangerous practice, and they ought never to be given, except at the suggestion of a medical man. It is far better, if the child is restless at night, to have it frequently taken out of its cot, and carried about in an airy room; for the cool air, and change of posture, will do much to allay the feverishness and restlessness of the child; and if sleeplessness should still continue, sponge its little face and hands, and refreshing sleep will often follow.

From these few hints, it must have been seen how much the sufferings from teething may be mitigated by judicious management. That, if the parent is able to support her infant upon the breast alone, teething will be found comparatively an easy process, and unattended with danger; the mother thus reaping a delightful reward for all the anxieties and privations which nursing necessarily involves. That the child brought up partially, or entirely, by hand will always pass through dentition with more or less of pain and difficulty;

but that even here, if the diet has been properly regulated, much less suffering and inconvenience will arise than when less attention has been paid to it. And, lastly, that, when teething is difficult, how highly important it is to call in proper aid at an early period, and to carry out fully the directions of the medical attendant, allowing no foolish prejudices to interfere with his prescriptions and management.

If I stood in need of any argument to impress upon the mind of a parent the importance of attending to the last injunction, I would simply state, that its neglect is but too frequently the cause of disease of the brain, terminating in death, or a state of idiotcy far worse than death, of which I know more than one living instance.

It may be as well to add, that *eruptions* about the ears, head, face, and various parts of the body, very frequently appear during the process of the first teething. If they are slight, they should be left alone, being rather useful than otherwise; if they are troublesome, they must receive that kind of attention from the parent which will be pointed out under the chapter on diseases. The same remark applies to enlargements of the glands of the neck, which frequently appear at this time. It is only necessary to make one further remark, that in some infants a rash always precedes the cutting a tooth. Sometimes it appears in the

form of hard elevated pimples as large as peas; in other instances in the form of red patches, of the size of a shilling, upon the arms, shoulders, and back of the neck. They are always harmless, require no particular attention, and prevent, I doubt not, more serious complaints.

SECT. II. — HINTS ON THE PERMANENT OR ADULT TEETH.

Parents are not sufficiently alive to the importance of attending to the condition of the mouth of their children at the period of changing the first for the second set of teeth; they do not seem to be aware how much the comfort, appearance, and future health of the child depends upon it. Nor do they subsequently impress upon the minds of their children how necessary, on their part, is the observance of certain rules for the preservation of the teeth, and how distressing are the effects which result from their neglect. It is proposed, here, to say a few words for the information and guidance of the parent upon this subject.

The manner in which they appear. — The change of the temporary for the permanent or adult teeth commences, in the majority of instances, at about seven years of age; occasionally

it occurs as early as five, and as late as eight years and a half. The necessity which exists for this change, and the mode by which it is effected, are striking and beautiful; it is however not our object to enter fully upon its consideration here.

It has already been observed, that the infant is born with the rudiments of two sets of teeth in the jaw, although neither make their appearance till long after birth. The time when, and the manner in which the first set appear has been pointed out. Now although these admirably answer the purposes for which they were given up to the seventh year, after this period they fail to do so; they are not sufficiently numerous,—in their structure they are not strong or durable —nor is their power of mastication sufficiently great.

They are not sufficiently large or numerous. If the mouth of a child at this age is examined, it will be seen, that a considerable interval has taken place between the teeth in consequence of the growth and expansion of the face; hence a larger set has become necessary to fill the arch. But it may be asked, do not the teeth grow with the growth of the body? and if not, why is it so? They do not, and for this reason: the important office which these organs are destined to perform requires that they should be composed of a substance too dense and of too low an organization

to allow of any subsequent growth and enlargement. Thus the size of the teeth is determined and acquired before they make their appearance through the gums. This being the case, it will be readily seen, that the teeth which would be of appropriate size in the mouth of the infant, would be quite inadequate to the enlarged dimensions of the adult; hence the necessity of a second set, exceeding in number and size the teeth of the first.

That a necessity also exists at this age, that the weak and delicate teeth of childhood should be exchanged for a set stronger and more durable in their structure, more robust and more powerful, will be sufficiently apparent, if we only recollect the great change which has gradually been taking place in the nature of the food of the two epochs of childhood and adult age.

The second set, or permanent teeth, then, lying under the milk-teeth and hidden in the jaw, undergo in this situation their full development, before they appear above the gum. This occurrence commences about seven years of age, at which period the first set begin to fall out, from their roots becoming absorbed, and no longer retaining their hold of the jaw; to be entirely replaced in the course of a few years by the permanent set, which thus succeeds them. The first teeth of this set which make their appearance are

the large double teeth, which emerge from the gum immediately behind the last of the temporary set. Next the two front teeth of the lower jaw fall out, and are succeeded by two others of similar character and form, but of larger size; then the two corresponding teeth of the upper row are cast off, and their place supplied; shortly after the teeth immediately adjoining these; then the double teeth of the first set are exchanged for their smaller successors of the second. The eye-teeth after a time begin to make their appearance; and then more double teeth; making in all twenty-eight teeth, and occupying in their development from the seventh to the fourteenth year of age. They are not, however, yet complete; for between the latter date and the twenty-first year four more teeth appear, called the wisdom teeth, making the adult set or permanent teeth to amount in all to thirty-two teeth. It should be observed, that whilst this is the most usual course in which this set appear, the line of succession is sometimes different.

Their value and importance.—It would seem almost unnecessary to say a word upon so self-evident a truth, and yet perhaps the full extent of this statement is not generally appreciated. It has not, perhaps, occurred to the minds of all, that upon the right position and arrangement of

the teeth *the beauty* and *expression of the countenance* much depends. But so it is; for however regular and perfect the general features, if the teeth are irregular or deficient, an unpleasing expression, proportionate to the extent of the displacement, is inevitably produced. Now every mother should be alive to this fact, that she may early apply to the dentist to have any error of the above nature rectified, before it is too late.

On their complete and entire state also depends *the perfection of utterance and articulation.* The child, for instance, makes no attempt at articulation until it has acquired several teeth; this faculty becomes also exceedingly imperfect during the process of changing them; from this time it continues to improve, until again it is permanently impaired in old age, when they are finally lost. And so again, if a child lose merely a single tooth from the front of its mouth, lisping will result; or if a supernumerary or irregular tooth be present, the articulation will be abrupt and imperfect: — the former plainly showing the importance of the entireness of the series, and the latter, the necessity of regularity in their arrangement and position.

The teeth, however, are chiefly important in relation to the part they sustain in connection with digestion, viz. the mastication of the food. By this act the food, after being received into

the mouth, is mixed with the saliva and broken down, till it becomes of an uniform pulpy consistence, fit for being easily swallowed, and acted upon by the gastric juice on its arrival in the stomach. That due mastication of the food is essential to healthy digestion, which will be promoted or retarded in exact proportion as it approaches or falls short of this point, is a fact so generally known as scarcely to need comment. Suffice it to add, that, if food be introduced into the stomach unmasticated, the gastric juice will only act upon its surface; and after a number of hours it will be either rejected by vomiting, or pass on into the intestine, to give rise to cholic, bowel complaints, or flatulence, and very frequently in children to a serious attack of convulsions.

Their management whilst coming. —During the advance of the permanent teeth, every parent ought to have the mouth of her child inspected occasionally, that any irregularity in their position or arrangement may be prevented. And it is equally her duty to see to it, that she choose a competent person to do this, since great mistakes are not unfrequently made in this matter, and which themselves become the source of evils far more serious than those they are intended to obviate. "I have known," says Mr. Bell, "no

less than eight or even ten firm teeth forcibly removed from the jaws of a child at once, when there was not the slightest reason to apprehend any evil result from their being left alone." Here there was a most cruel, because unnecessary infliction of pain, as well as great hazard incurred of seriously injuring the permanent teeth by interfering with the secretion of their enamel. And besides all this there is another and yet greater evil, for, if the temporary teeth be removed, before the permanent ones are so advanced as to be ready to occupy their situation, the arch of the jaw will assuredly contract, and when, subsequently, the permanent teeth are fully formed, there will not be room for them to range in their proper situation. Thus the operation which was intended to prevent irregularity, becomes the cause of its occurrence, and that in its very worst form, producing a want of accordance between the size of the teeth and that of the jaw.

The eye-teeth generally occasion most anxiety to a parent, from the prominent position in which they present themselves; but in the majority of cases nothing but time is required to reduce them to their proper station. But, whatever may be the peculiarities of each individual case, the dentist will decide what may be required; only, I would again repeat, do not neglect the occasional inspection of the mouth at this age, if you

regard the future comfort and appearance of your child.

Means to be used for their preservation. — The preservation of the teeth requires attention to several points; the first and principal of which is, to enforce the habit in the child of thoroughly cleaning the teeth by means of water and a brush night and morning, and rinsing out the mouth after his dinner meal. The brush should not be very hard, as it will not only be more difficult to clean the interstices between the teeth, the part in which the tartar is most likely to be deposited, but by its friction will occasion the gradual absorption of the gum and the exposure of the neck of the teeth. The hair of the brush should be firm and elastic, and not too closely set. If there is a tendency to the formation of *tartar*, then it will be necessary to have recourse to some tooth-powder. Tooth-powders, however, must be chosen with care, as many of them are composed of substances highly injurious to the teeth. Mr. Bell says, "many of the tooth-powders which are offered for sale, with the promise of rendering the teeth beautifully white, perform, for a time, all that is promised, at the expense of permanent and irremediable injury to the teeth; for they often contain a quantity of tartaric or other acid, which effects a gradual decomposition of the

enamel." One of the commonest tooth-powders of the present day, and which is a very good form, is the following:—

Prepared chalk, three ounces;
Orris root, powdered, half an ounce;
Powdered myrrh, half an ounce;
Cuttle-fish, powdered, one ounce;
Essential oil of cinnamon, four drops.—Mix.

But the best of all dentifrices is the plain camphorated tooth-powder; for while the camphor does no injury to the teeth, it instantly destroys those minute creatures which produce the tartar and green incrustation on the enamel. "To promote a general cleanliness of the teeth, the fact cannot be too often repeated, that a microscopic observer, M. Mandl, has discovered that, not only the foul mucous covering of the tongue, but the tartar of the teeth, consists of the dead remains of millions of infusorial animalculæ. Leuwenhöek discovered long ago, that the mucous secretion of the human mouth abounded in living specimens of these minute beings; but it remained for M. Mandl to make known that the tartar of the teeth consists of their dead bodies compactly united together in one mass, by chemical decomposition. When a portion of this tartar of the teeth is softened in clear water, and placed under a powerful microscope, it is found to consist of their delicate skeletons."

The best preservative, then, against the formation of tartar, is to see that the child cleans his teeth thoroughly night and morning with the brush and water, and also that he rinses out the mouth after the dinner meal. And if tartar should be disposed to form, then he must in addition use tooth-powder.

If the gums should be tender, irritable, and bleed (as is frequently the case when an individual gets out of health, or the tartar accumulates) the mouth may be washed night and morning with a tumbler of tepid water, containing from ten to twenty drops of the tincture of myrrh, and the same quantity of spirits of camphor; or the following form may be used: —

Alum, one drachm and a half;
Tincture of myrrh, two drachms;
Camphor mixture, five ounces and a half.—Mix.

The use of *acids* to the teeth cannot be too strongly deprecated: they decompose their substance and lead to their rapid decay. Hence the whiteness produced by acid tooth powders and washes is not less deceitful than ruinous in its consequences. As has just been observed, they perform all that their vendors promise, causing the teeth, for a little while, to become very white and beautiful in their appearance, but at the same time injuring them irremediably; the enamel becomes gradually decomposed, the bone of the tooth

exposed, and its death is the inevitable consequence.

It is therefore of great importance when acid medicines are ordered for children that they should be taken through a glass tube, to prevent their coming in contact with the teeth. From a want of this precaution, I know a lady (and there are many such instances) who once had as sound and fine a set of teeth as any one could boast of, but from this cause has had nearly the whole of the upper row destroyed. She was in delicate health; it was judged requisite that she should take for a considerable time (with other medicines) sulphuric acid: but the glass tube was not thought of, and the consequences followed which have been described.

Calomel, as it is frequently given alone, or in the little white powders, in infancy and childhood, by mothers and nurses, is productive of serious and indeed irremediable injury to the teeth. Mr. Bell says, "The immoderate use of mercury in early infancy produces, more perhaps than any other similar cause, that universal tendency to decay, which, in many instances, destroys almost every tooth at an early age. It is certainly not unimportant to bear this fact in mind, in the administration of this *sovereign remedy*, this panacea, as many appear to consider it, in infantile diseases."

The teeth are exceedingly apt to suffer from

sudden variations of temperature. Fluids, therefore, should never be taken into the mouth so hot or so cold as to produce the slightest pain; and, for the same reason, the water with which the mouth is cleansed should in winter be always warm or tepid. When ices are taken, the precaution of placing them in the centre of the mouth, so as to prevent contact with the teeth, should be carefully observed.

There are many other causes which might be mentioned as tending to induce decay of the teeth, but their consideration here is purposely avoided. It is hoped enough has been said to draw the parent's attention to the subject of the teeth, to prevent their neglect, and yet at the same time to induce a cautious management.

PART II.

THE MATERNAL MANAGEMENT OF THE CHILD IN DISEASE.

In the previous part of this work—devoted to the general management of the child in health—I have endeavoured to teach the young mother, that the prevention of disease is her province, not its cure; that to this object all her best efforts must be directed: and, moreover, that to tamper with medicine, when disease has actually commenced, is to hazard the life of her offspring. The advantage, however, of an early and prompt application of remedies in the diseases of childhood, generally so active in their progress and severe in their character, has induced me to attempt, in this the Second Part, to point out how the first symptoms of disease may be early detected by the parent. The subject has been felt to be a difficult one, and to give particular directions, quite out of the question; but it is hoped that the suggestions thrown out will in some measure answer the important purpose intended. The maternal management of disease, however, forms the principal portion of this division of the work; a subject

which the author regards as of high and serious moment. Small as is the attention which has been hitherto paid to it, yet, in the diseases of infancy and childhood, how invaluable is a careful and judicious maternal superintendence to give effect to the measures prescribed by the physician! — how many a child is lost for want of it!

CHAPTER I.

HINTS FOR THE EARLY DETECTION OF DISEASE IN THE CHILD BY THE MOTHER.

LIFE is soon extinguished in infancy. At this epoch any disease is formidable, and must be met most promptly. It is either sudden and active in its assaults, or comes with slow and insidious approach. The first signs of its coming on are not always visible to an unpractised eye: it may have made dangerous advances before the mother's mind is awakened to its presence; and medical aid may be solicited when remedies and advice are no longer of any avail.

It is, therefore, highly important that a mother should possess such information as will enable her to detect disease at its first appearance, and thus insure for her child timely medical assistance, and

spare herself those painful, but unavailing regrets, which would infallibly await her from a supposed neglect. This knowledge it will not be difficult for her to obtain. She has only to become familiar with those indications which constitute health, and she will for the most part be able to detect the first appearances of disease.

SECT. I. — SIGNS OF HEALTH.

The signs of health are to be found, first, in the healthy performance of the various functions of the body; the regular demands made for its supply, neither in excess nor deficiency; and a similar regularity in its excretions both in quantity and appearance.

If the figure of the healthy infant is observed, something may be learnt from this. There will be perceived such an universal roundness in all parts of the child's body, that there is no such thing as an angle to be found in the whole figure; whether the limbs are bent or straight, every line forms a portion of a circle. The limbs will feel firm and solid, and unless they are bent, the joints cannot be discovered.

The tongue, even in health, is always white, but it will be free from sores, — the skin cool, — the eye bright, — the complexion clear, — the

head cool, — and the abdomen not projecting too far, — the breathing regular, and without effort.

When awake, the infant will be cheerful and sprightly, and, loving to be played with, will often break out into its merry, happy, laugh; whilst, on the other hand, when asleep, it will appear calm, every feature composed, its countenance displaying an expression of happiness, and frequently, perhaps, lit up with a smile.

SECT. II. — SIGNS OF DISEASE.

Just in proportion as the above appearances are present and entire, health may be said to exist; and just in proportion to their partial or total absence disease will have usurped its place.

We will, however, for the sake of clearness examine the signs of disease as they are manifested separately by the countenance, — the gestures, — in sleep, — in the stools, — in the cry, — and by the breathing and cough.

THE COUNTENANCE. — In health, the countenance of a child is expressive of serenity in mind and body; but if the child be unwell, this expression will be changed, and in a manner which, to a certain extent, will indicate what part of the system is at fault.

The brows will be contracted, if there is pain, and its seat is in the *head.* This is frequently the very first outward sign of any thing being wrong, and will occur at the very onset of disease; if, therefore, remarked at an early period, and proper remedies used, its notice may prevent one of the most fearful of infantile complaints — "Water in the Head."

If this sign is passed by unheeded, and the above disease be threatened, soon the eyes will become fixed and staring, — the head hot, and moved uneasily from side to side upon the pillow, or lie heavily upon the nurse's arm, — the child will start in its sleep, grinding its teeth, and awake alarmed and screaming, — its face will be flushed, particularly the cheeks (as if rouged), — its hands hot, but feet cold, — its bowels obstinately costive, or its motions scanty, dark-coloured, and foul.

If *the lips are drawn apart,* so as to show the teeth or gums, the seat of the pain is in the *belly.* This sign, however, will only be present during the actual existence of suffering; if, therefore, there be any doubt whether it exist, press upon the stomach, and watch the effect on the expression of the countenance.

If the pain arise simply from irritation of the bowels excited from indigestion, it will be temporary, and the sign will go and come just as the

spasm may occur, and slight remedial measures will give relief.

If, however, the disease be more serious, and inflammation ensue, this sign will be more constantly present, and soon the countenance will become pale, or sallow and sunken, — the child will dread motion, and lie upon its back with the knees bent up to the belly, — the tongue will be loaded, — and in breathing, while the chest will be seen to heave with more than usual effort, the muscles of the belly will remain perfectly quiescent.

If the nostrils are drawn upwards and in quick motion, pain exists in the *chest.* This sign, however, will generally be the accompaniment of inflammation of the chest, in which case the countenance will be discoloured, — the eyes more or less staring, and the breathing will be difficult and hurried; and if the child's mode of respiring be watched, the chest will be observed to be unmoved, while the belly quickly heaves with every inspiration.

Convulsions are generally preceded by some changes in the countenance. The upper lip will be drawn up, and is occasionally bluish or livid. Then there may be slight squinting, or a singular rotation of the eye upon its own axis; alternate flushing or paleness of the face; and sudden animation followed by languor.

These signs will sometimes manifest themselves many hours, nay days, before the attack occurs; may be looked upon as premonitory; and if timely noticed, and suitable medical aid resorted to, the occurrence of a fit may be altogether prevented.

The state of the eyes should always be attended to. In health they are clear and bright, but in disease they become dull, and give a heavy appearance to the countenance; though after long continued irritation they will assume a degree of quickness which is very remarkable, and a sort of pearly brightness which is better known from observation than it can be from description.

The direction of the eyes, too, should be regarded, for from this we may learn something. When the infant is first brought to the light, both eyes are scarcely ever directed to the same object: this occurs without any tendency to disease, and merely proves that, regarding one object with both eyes is only an acquired habit. But when the child has come to that age when the eyes are by habit directed to the same object, and afterwards it *loses* that power, this circumstance alone may be looked upon as a frequent prelude to disease affecting the head.

THE GESTURES.—The gestures of a healthy child are all easy and natural; but in sickness

those deviations occur, which alone will often denote the nature of the disease.

Suppose an infant to have acquired the power to support itself, to hold its head erect; let sickness come, its head will droop immediately, and this power will be lost, only to be regained with the return of health; and during the interval every posture and movement will be that of languor.

The little one that has just taught itself to run alone from chair to chair, having two or three teeth pressing upon and irritating the gums, will for a time be completely taken off its feet, and perhaps lie languidly in its cot, or on its nurse's arm.

The legs being drawn up to the belly, and accompanied by crying, are proofs of disorder and pain in the bowels. Press upon this part, and your pressure will increase the pain. Look to the secretions from the bowels themselves, and by their unhealthy character your suspicions, in reference to the seat of the disorder, are at once confirmed.

The hands of a child in health are rarely carried above its mouth; but let there be any thing wrong about the head and pain present, and the little one's hands will be constantly raised to the head and face.

Sudden starting when awake, as also during

sleep, though it occur from trifling causes, should never be disregarded. It is frequently connected with approaching disorder of the brain. It may forebode a convulsive fit, and such suspicion is confirmed, if you find the thumb of the child drawn in and firmly pressed upon the palm, with the fingers so compressed upon it, that the hand cannot be forced open without difficulty. The same condition will exist in the toes, but not to so great a degree; there may also be a puffy state of the back of the hands and feet, and both foot and wrist bent downwards.

There are other and milder signs threatening convulsions and connected with gesture, which should be regarded: — the head being drawn rigidly backwards,—an arm fixed firmly to the side, or near to it,—as also one of the legs drawn stiffly upwards. These signs, as also those enumerated above, are confirmed beyond all doubt, if there be present certain alterations in the usual habits of the child:—if the sleep is disturbed,—if there be frequent fits of crying,—great peevishness of temper,—the countenance alternately flushed and pale,—sudden animation followed by as sudden a fit of languor,—catchings of the breath followed by a long and deep inspiration,—all so many premonitory symptoms of an approaching attack.

THE SLEEP. — The sleep of the infant in

health is quiet, composed, and refreshing. In very early infancy, when not at the breast, it is for the most part asleep in its cot; and although as the months advance it sleeps less, yet when the hour for repose arrives, the child is no sooner laid down to rest, than it drops off into a quiet, peaceful slumber.

Not so, if ill. Frequently it will be unwilling to be put into its cot at all, and the nurse will be obliged to take the infant in her arms; it will then sleep but for a short time, and in a restless and disturbed manner.

If it suffer pain, however slight, the countenance will indicate it; and, as when awake, so now, if there is anything wrong about the head, the contraction of the eyebrow and grinding of the teeth will appear; if any thing wrong about the belly, the lips will be drawn apart, showing the teeth or gums,—and in both instances there will be great restlessness and frequent startings.

The Stools.—In the new-born infant the motions are dark-coloured, very much like pitch both in consistence and appearance. The first milk, however, secreted in the mother's breast, acts as an aperient upon the infant's bowels, and thus, in about four-and-twenty hours, it is cleansed away; or if it should not, a tea-spoonful of castor oil accomplishes this purpose.

From this time, and through the whole of infancy, the stools will be of a lightish yellow colour, the consistence of thin mustard, having little smell, smooth in appearance, and therefore free from lumps or white curded matter, and passed without pain or any considerable quantity of wind. And as long as the child is in health, it will have daily two or three, or even four, of these evacuations. But as it grows older, they will not be quite so frequent; they will become darker in colour, and more solid, though not so much so as in the adult.

Any deviation, then, from the above characters, is of course a sign of something wrong; and as a deranged condition of the bowels is frequently the first indication we have of coming disease, the nurse should daily be directed to watch the evacuations. Their appearance, colour, and the manner in which discharged, are the points principally to be looked to. If the stools have a very curdy appearance, or are too liquid, or green, or dark-coloured, or smell badly, they are unnatural. And in reference to the manner in which they are discharged, it should be borne in mind, that, in a healthy child, the motion is passed with but little wind, and as if *squeezed* out, but in disease, it will be thrown out with considerable force, which is a sign of great irritation. The number, too, of stools passed within the four-and-twenty hours it

is important to note, so that if the child does not have its accustomed relief, (and it must not be forgotten that children, although in perfect health, differ as to the precise number,) a little castor oil may be at once exhibited, and thus mischief be prevented.

This, however, is not the place to discuss the question of disordered bowels, but simply to point out how this circumstance may be known.*

THE CRY. — By crying the infant, for the most part, manifests its sensations and wants. A parent, therefore, should learn to distinguish with accuracy *that* cry which denotes hunger, and *that* which proceeds from pain and other causes. It is important a young mother's attention should be directed to this subject, if it were only to guard her from falling into the common and most injurious error of looking upon every cry of her offspring as an indication of hunger, a mistake often fraught with fatal results.

The cry of hunger may be easily recognised by a little observation. An infant awakening, and needing the breast, will generally show certain signs of hunger before it cries for food. It will put out its tongue, move its head about as if in search of the breast, and if at this moment the

* See section on Disorders of the Stomach and Bowels, p. 231.

mother comes in sight, thoroughly arousing himself, he will manifest his joy at seeing her, and eagerly take his meal; but if, on the other hand, she is not present, and these signs are not heeded, the cry will begin, and continue, much in the same tone, until the supply is obtained. Now these signs are not present when the cry is occasioned by some other cause. The child, it is true, will take the breast when offered, *but it does not ask for it;* and it will become quiet as soon as put there; but this composure will be of short duration, for as soon as it is taken from it, its lamentations will be resumed with redoubled violence.

The cry of discomfort will with some children be frequent enough, the most trifling causes producing it. Thus, some temporary inconvenience from posture: — the child has been lying long in one position, and has grown tired of it; some slight pain or uneasiness caused by a rucking or pressure in some portion of its dress; or perhaps positive pain, though slight enough, from the pricking of a pin: — these and many other causes of a slight and passing kind will be continually occurring, and no mother will have difficulty in detecting the exciting cause, and at once removing it.

The cry of pain and suffering is variously expressed. If a child, usually placid and cheerful,

gets fretful, fractious, and crying with its little fingers continually going to its mouth, this denotes pain caused by some new coming tooth pressing against a tender and inflamed gum. If a child, not accustomed to cry much, on some occasion is perpetually crying, this denotes some continued, recurring, painful sensation somewhere, and demands medical attention to detect and remove the cause. If a child cry violently, this denotes the presence of severe pain, unless it be the effect of passion. If it be from pain, and you find at the same time the child incessantly drawing up its legs towards its body, it is a sign that it is suffering from disorder and pain in its bowels. This may either be trifling in degree, caused by spasm, the result of slight irritation, possibly the effect of over-feeding (the most frequent cry of infancy), to be relieved perhaps by the gentle friction of a warm hand before the fire (and not by putting to the breast), or, it may have a much more serious origin, and is not thus to be removed, pointing out the necessity for prompt professional attention. If the violent fit of crying be simply the effect of temper (and a discerning mother will readily perceive the difference), the child will sometimes hold its breath, until the recovery of it seems doubtful, and it will get black in the face. To remedy this, plunge the hand or both into cold water; this will induce

gasping or sighing, and so the breath is again fully drawn.

The flow of tears seems only to attend the mental feelings, or emotions, as they are called, and to be one of the chief signs of their activity. It therefore becomes possible to distinguish the cry of temper and self-will from that of simple bodily suffering, which has no tears. *This* must be inquired into; *the other* ought to be neglected. Even young children are gratified by the attention paid to their fits of naughtiness, and are less likely to repeat them if experience teaches them that they are not attended to.

Moaning, or the plaintive cry which characterizes some diseases, needs no description: it will not escape the observation of a kind mother.

These varieties then of infantile cry, with their accompanying signs, are all more or less important and are easily detected. If it is the result of hunger, the breast must be given and only then; if excited by some temporary inconvenience, the cause of it should be sought for and be removed; — if caused by pain excited by disease, the mother by detecting it will early seek medical aid, and will thus very frequently prevent serious indisposition to her child, greatly abridge the duration and violence of the attack if it take place, or if she have to endure the poignant grief of the loss of

her little one, will at least be spared the unavailing but most painful regrets of supposed neglect.

THE BREATHING. — The breathing of a child in health is formed of equal inspirations and expirations, and it breathes quietly, regularly, inaudibly, and without effort. But let inflammation of the air-tubes or lungs take place, and the respiration will become in a few hours so quickened and hurried, and perhaps audible, that the attention has only to be directed to the circumstance to be at once perceived.

Now all changes which occur in the breathing from its healthy standard, however slight the shades of difference may be, it is most important should be noticed early. For many of the complaints of the chest, although very formidable in their character, if only seen early by the medical man, may be arrested in their progress; but otherwise may be beyond the control of art. A parent, therefore, should make herself familiar with the breathing of her child in health, and she will readily mark any change which may arise.

OF COUGH.— Of this symptom I should not have said any thing in this chapter, as it can never fail to be noticed, except that it is highly necessary to throw out one caution. Whenever a child has the symptoms of a common cold, attended by

hoarseness and *a rough cough*, always look upon it with suspicion, narrowly watch the child, and never neglect seeking a medical opinion. Hoarseness does not usually attend a common cold in a very young child, and these symptoms may be premonitory of an attack of "croup;" a disease excessively rapid in its progress, and which, from the importance of the parts affected, carrying on, as they do, a function indispensably necessary to life, requires the most prompt and decided treatment.

The following observations of Dr. Cheyne are so strikingly illustrative, and so pertinent to my present purpose, that although they will be again referred to, I cannot refrain inserting them here: — "In the approach of an attack of croup, which almost always takes place in the evening, probably of a day during which the child has been exposed to the weather, and often after catarrhal symptoms have existed for several days, he may be observed to be excited, in variable spirits, more ready than usual to laugh than to cry, a little flushed, occasionally coughing, the sound of the cough being rough, like that which attends the catarrhal stage of the measles. More generally, however, the patient has been for some time in bed and asleep, before the nature of the disease with which he is threatened is apparent; then, perhaps, without waking, he gives a very unusual cough, well

known to any one who has witnessed an attack of the croup; it rings as if the child had coughed through a brazen trumpet; it is truly a *tussis clangosa;* it penetrates the walls and floor of the apartment, and startles the experienced mother,—'Oh! I am afraid our child is taking the croup!' She runs to the nursery, finds her child sleeping softly, and hopes she may be mistaken. But remaining to tend him, before long the ringing cough, a single cough, is repeated again and again; the patient is roused, and then a new symptom is remarked; the sound of his voice is changed; puling, and as if the throat were swelled, it corresponds with the cough," &c.

How important that a mother should be acquainted with the above signs of one of the most terrific complaints to which childhood is subject; for, if she only send for medical assistance during its first stage, the treatment, if vigorous and judicious, will be almost invariably successful; whereas, if this "golden opportunity" is lost, this disease will seldom yield to the influence of measures, however wisely chosen or perseveringly employed.

SECT. III. — OTHER CIRCUMSTANCES WHICH WILL ASSIST IN THE EARLY DETECTION OF DISEASE.

1. *The influence of the seasons in producing particular forms of disorder.*— The recollection of the fact, that at the different seasons of the year some diseases are more prevalent than at other periods, will greatly aid a judicious parent in the early detection of the presence of disorder, and its kind, in her child.

Thus, in *the early part of the winter*, what is called catarrh, viz. an increased secretion of mucus from the membranes of the nose, fauces, and air-tubes, with fever, and attended with sneezing and cough, thirst, lassitude, and want of appetite, is generally prevalent.

As the winter advances, the air-tubes of the lungs, and the lungs themselves, are liable to become the seat of disorder; and those signs will present themselves, which have been pointed out in the previous section as characteristic of such attacks.

In the spring, we have still the same diseases prevalent, and in addition, measles, scarlet fever, small-pox, and chicken pox, which increase in liability towards the close of this season, and with the first weeks of summer.

In the summer, disease is less prevalent than at

any other period of the year; but towards its middle and close, and through the whole of the autumnal months, bowel complaints may be expected, in the forms of diarrhœa, cholera, and dysentery.

2. *The influence of an hereditary predisposition to certain diseases.* — Without entering into this subject at large, still it may be useful to remark, that in some families there is a predisposition to some diseases, which, occurring in the first child, will, as each succeeding child is born, attack at the same age. Amongst other diseases of this class are, croup, hooping-cough, and water in the head.

This observation should not only lead a mother to be alive to the possibility of the successional occurrence of these diseases in her family, and so early note their appearance, and seek medical advice, but should at the same time make her most anxious, on the one hand, to shield her child from all their exciting causes, and on the other, to adopt those measures which may contribute indirectly to overcome the constitutional predisposition to them.

Of the *scrofulous constitution*, I will merely mention here, that it is of the greatest importance, where a predisposition to this disease exists in a

family, that a mother should immediately attend to any alteration in the gait or contour of her child, and give prompt attention also to any complaint made of swelling about a joint, although it may be unattended with pain. The importance of this remark will be seen by contrasting the result of the following cases which occurred in children of the same family.

CASE I.

A. B., a female child, having blue eyes, light hair, and a fair complexion, in the early part of the year 1838, being then two years of age, had an enlargement of the left knee joint. *For some weeks previous to this time, there had been a degree of heat about the part; but as no pain apparently existed, it was not regarded as of any consequence, and nothing was done.* The child living in the neighbourhood of London, was afterwards placed under medical treatment. Two or three months having elapsed, it was brought to town, and shown to me, in consequence of a slight tumefaction over the lower part of the spine. This soon disappeared under the measures employed, and eventually the disease of the knee (evidently scrofulous) was arrested, so that now the case promises to be cured; but the joint will for ever be stiff, and the limb thus affected shorter than the other.

CASE II.

G. B., the brother of the above, a handsome boy, with light hair, fine blue eyes, — indeed, very much like his little sister, — in the year 1836, had enlargements of the glands in his neck, which were relieved by the treatment resorted to.

In April, 1839, being then eight years old, he was observed by his mother to limp slightly in walking, but complained of little or no pain. From the caution, however, which had been given to the parent at the time I was consulted about the previous case, to notice at an early period any symptom of this nature in her children, *the fact was immediately attended to.* The affection was evidently in the hip; there was imperfection in the gait, and pain upon pressing over the joint. A blister was applied, perfect rest to the limb enjoined, and steel medicines ordered; and in a fortnight the motions of the joint were restrained more effectually by the application of strips of soap plaster and a bandage. In three months the child was ordered to the sea-side, and eventually was able to walk without the slightest limp or pain, and may be said to be quite well.

I would not say that in the first case, if the disease had been discovered early, and at that time

met by judicious medical treatment, a stiff knee and shortened limb would have been prevented, although this is my belief; — but in reference to the latter case, I have no hesitation in saying that, without the disease had been early detected by the mother, and as promptly attended to by her, the remedial measures might have failed, — certainly the result would not have been so highly satisfactory as it was.

CHAPTER II.

ACCIDENTS AND DISEASES.

THE especial province of the mother is the prevention of disease, not its cure. To the establishment and carrying out of this principle, every word contained in the preceding pages has directly or indirectly tended.

This, however, is not all. When disease attacks the child, the mother has then a part to perform, which it is especially important during the epochs of infancy and childhood should be done well. I refer to those duties which constitute the maternal part of the management of disease.

Medical treatment, for its successful issue, is greatly dependent upon a careful, pains-taking, and judicious maternal superintendence. No medical treatment can avail at any time, if directions be only partially carried out, or be negligently attended to; and will most assuredly fail altogether, if counteracted by the erroneous prejudices of ignorant attendants. But to the affections of infancy and childhood, this remark applies with

great force; since, at this period, disease is generally so sudden in its assaults, and rapid in its progress, that unless the measures prescribed are rigidly and promptly administered, their exhibition is soon rendered altogether fruitless.

The amount of suffering, too, may be greatly lessened by the thoughtful and discerning attentions of the mother. The wants and necessities of the young child must be anticipated; the fretfulness produced by disease, soothed by kind and affectionate persuasion; and the possibility of the sick and sensitive child being exposed to harsh and ungentle conduct, carefully provided against.

Again, not only is a firm and strict compliance with medical directions in the administration of remedies, of regimen, and general measures, necessary, but an unbiassed, faithful, and full report of symptoms to the physician, when he visits his little patient, is of the first importance. An ignorant servant or nurse, unless great caution be exercised by the medical attendant, may, by an unintentional but erroneous report of symptoms, produce a very wrong impression upon his mind, as to the actual state of the disease. His judgment may, as a consequence, be biassed in a wrong direction, and the result prove seriously injurious to the well-doing of the patient. The medical man cannot sit hour after hour watching symptoms; hence the great importance of their

being faithfully reported. This can alone be done by the mother, or some person equally competent.

There are other weighty considerations which might be adduced here, proving how much depends upon efficient maternal management in the time of sickness; but they will be severally dwelt upon, when the diseases with which they are more particularly connected are spoken of.

It is the object, then, of this chapter to point out what constitutes the maternal management of the accidents and diseases of children.

SECT. I. — ACCIDENTS AND DISEASES WHICH MAY OCCUR TO THE INFANT AT BIRTH, OR SOON AFTER.

STILL-BORN. — Sometimes the child comes into the world apparently dead, and, unless the most active exertions are made by the attendants, is lost. The superintendence of the means used devolves upon the medical man; but it would be often well if his assistants were already acquainted with the measures pursued under these circumstances, for they would be more likely to be carried into effect with promptitude and success, than they now frequently are. And again, the still-born child is frequently in this state from having been born very rapidly, and before the

medical man can have arrived; it will be more especially useful in such a case, that the attendants in the lying-in-room should know how to proceed.

The various causes producing this condition it is unnecessary to mention.

The condition itself may exist in a greater or less degree: the infant may be completely still-born, with no indication of life, except, perhaps, the pulsation of the cord, or a feeble action of the heart;—or it may make ineffectual efforts at breathing, or even cry faintly, and yet subsequently perish for want of strength to establish perfectly the process of respiration. Under all these circumstances, a good deal can often be effected by art. In every instance, therefore, in which we have not positive evidence of the child being dead, in the existence of putrefaction, or of such malformation as is incompatible with life, it is our duty to give a fair trial to the means for restoring suspended animation; and as long as the slightest attempt at motion of the respiratory organs is evinced, or the least pulsation of the heart continues, we have good grounds for persevering and hoping for ultimate success.

The measures to be employed to restore a still-born child will be a little modified by the circumstances present.

If there is no pulsation — no beating in the cord,

when the child comes into the world, it may at once be separated from the mother. This is to be effected by first tying the navel-string with common sewing thread (three or four times doubled), about two inches from the body of the child, and again two inches from the former ligature, and then dividing the cord with a pair of scissors between the two. And now the means for its restoration are to be made use of, which are detailed below, viz. inflation of the lungs, and perhaps the warm bath. If, with the above circumstances, the child's face be livid and swollen, some drops of blood should previously be allowed to escape before the ligature is applied to that part of the navel-string which is now only attached to the child.

If there is pulsation in the cord, but respiration is not fully established, it must not be divided; and as long as pulsation continues, and the child does not breathe perfectly and regularly, no ligature should be applied. The first thing to be done here, is to pass the finger, covered with the fold of a handkerchief or soft napkin to the back of the child's mouth, to remove any mucus which might obstruct the passage of air into the lungs, and at the same time to tickle those parts, and thereby excite respiratory movements. The chest should then be rubbed by the hand, and a gentle shock given to the body by slapping the back. If

these means fail, the chest and soles of the feet must next be rubbed with spirits, the nostrils and back of the throat irritated with a feather previously dipped in spirits of wine, and ammonia or hartshorn may be held to the nose.

Inflation of the lungs. — The above means not having been successful, and the pulsation in the cord having ceased, the infant must be separated, and inflation of the lungs resorted to. This is to be effected gently and cautiously as follows: —

The child, wrapped in flannel, is to be laid on its back upon a table placed near the fire. Its head is to be slightly extended, and the nostrils held between the fingers and thumb of one hand, whilst with the fingers of the other slight pressure is to be made upon the pit of the stomach, so as to prevent the air from passing into that organ. The lungs of the child are now to be filled with air, by the operator applying his own lips — with a fold of silk or muslin intervening, for the sake of cleanliness — to those of the child, and then simply blowing in its mouth, he is to propel the air from his own chest into that of the infant. Previously, however, to his doing this, he should make several deep and rapid inspirations, and, finally, a full inspiration, in order to obtain greater purity of air in his own lungs.

When the chest of the child has been thus distended, it is to be compressed gently with the

hand, so as to empty the lungs; and then the inflation, with the alternately compressing the chest, must be repeated again and again, until either the commencement of *natural respiration* is announced by a sneeze or deep sigh, or until after *long-continued, steady, persevering,* but unavailing efforts to effect this object shall have removed all ground of hope for a successful issue.

Whilst these efforts are being made, some other individual must endeavour to maintain or restore the warmth of the infant's body, by gently but constantly pressing and rubbing its limbs between his warm hands. And after respiration is established, the face must still be freely exposed to the air, whilst the warmth of the limbs and body is carefully sustained.

It will sometimes happen—and to this circumstance the operator should be fully alive—that when the child begins to manifest symptoms of returning animation, its tongue will be drawn backwards and upwards against the roof of the mouth, filling up the passage to the throat, and preventing further inflation of the lungs. This is to be remedied by the introduction of the forefinger to the upper and back part of the child's tongue, and gently pressing it downwards and forwards, by which the difficulty will be removed, and the air again passes.

The warm bath—More reliance may be placed

upon the above measure to restore animation, than upon the warm bath. Still this is sometimes useful, and therefore must not be neglected. Whilst inflation is going on, the bath may be got ready, then resorted to, and if unsuccessful, inflation may and ought again to be followed up. We should not relinquish our endeavours at resuscitation under two or three hours, or even longer; and if ultimately successful, the state of the infant should be carefully watched for two or three days.

If the bath is useful at all, it will be so immediately upon putting the infant into it; respiration will be excited followed by a cry; and if this does not occur at once, it would be wrong to keep the child longer in the bath, as it would be only losing valuable time which ought to be devoted to other efforts. The temperature of the bath should be about 100°; and if, upon plunging the infant into it, it fortunately excite the respiratory effort, it should then be taken out, rubbed with dry but hot flannels, and, when breathing is fully established, laid in a warm bed, or, what is still better, in its mother's bosom; letting it, however, have plenty of air.

INJURIES RECEIVED DURING BIRTH. — If a labour be long and tedious, the head and body of the child may be bruised and disfigured.

The shape of the head is frequently altered by the compression it has undergone, so that it may be elongated, and measure from the chin to the back of the head as much as six or seven inches. This always excites surprise, sometimes apprehension, in the minds of the attendants: there is no ground for it. It must be allowed to regain its natural shape without interference.

Tumours or swellings upon the head are very common. They arise from pressure upon the part during the labour. The only treatment that is required, or safe, is, freedom from all pressure, and the application of cold lotions composed of brandy or vinegar and water. The swelling will gradually subside. It will be right to direct the attention of the medical man to this circumstance.

The face may be frightfully disfigured from the above cause, exceedingly black, and the features distorted. Nothing is necessary here; in a few days the face will recover its proper appearance.

RETENTION OF URINE. — Occasionally an infant will not pass any urine for many hours after its birth. This most frequently arises from the fact of none being secreted. In the last case of this kind that I was called to, three days had apsed since birth, and no urine had been passed; it proved that none had been secreted. Some-

times, however, it is the effect of another cause, which the use of the warm bath will be found to remove, which should always therefore be employed four and twenty hours after the birth of the infant, if it has not by that time passed any water.

It now and then happens, but fortunately very rarely, that some physical obstruction exists. It is always important, therefore, for the nurse to pay attention to the above point; and it is her duty to direct the attention of the medical man to the subject, if anything unusual or unnatural be present. The same observation applies to the bowel also; and if twelve hours pass without any motion, the parts should be examined.

SWELLING OF THE BREASTS. — At birth, or two or three days subsequently, the breasts of the infant will frequently be found swollen, hard, and painful, containing a fluid much resembling milk. Some nurses endeavour to squeeze this out, and thus do great mischief; for by this means inflammation is excited in the part, and sometimes abscess is the result.

If the breasts are simply slightly enlarged, it is unnecessary to do any thing more than rub them occasionally and very gently with warm almond oil, and a little time will restore them to their proper size.

If, however, they are inflamed, hot, painful, with a red surface, and unusually large, a bread and water poultice must be applied every three or four hours, which will generally prevent either the formation of matter, or any other unpleasant consequence. In a few days, under this treatment, they will usually subside, and be quite well.

INFLAMMATION OF THE EYES. — About the second or third day after the child's birth, an inflammation sometimes attacks the eye, which is of considerable consequence. The more so, from its commencing in a way not calculated to excite the attention, or alarm the fears, of the mother or nurse. The child cannot express its sensations, and the swelling of the eye conceals the progress of the disease, so that serious mischief is frequently done before the medical man sees the patient. In the first place, the inflammation is not immediately noticed; and, in the second, the measures employed are frequently insufficient to check its progress: hence it causes more blindness (I refer to the lower classes of society more particularly) than any other inflammatory disorder that happens to the eye; and the number of children is very considerable, whose sight is partially or completely destroyed by it. The parent or nurse is apt to suppose, when this in-

flammation first appears, that it is merely a cold in the eye, which will go off; and the consequences which I have just mentioned take place, in many cases, before they are aware of the danger, and before the medical man is resorted to for assistance.

I only desire, in mentioning this complaint, to inform the attendants of the lying-in-room of its great importance, that it may not be trifled with, that upon its first approach the physician may be informed of it, and that the treatment he directs for its cure may be sedulously and rigidly followed.

Symptoms. — The inflammation commonly comes on about three days after birth, but it may take place at a later period. It may be known by its commencing thus: — When the child wakes from sleep, the eyelids will be observed to stick together a little; their edges will be redder than natural, and especially at the corners; the child experiences pain from the access of light, and therefore shuts the eye against it. A little white matter will also be observed lying on the inside of the lower lid. After a short time, the lids swell, become red on their external surface, and a large quantity of matter is secreted, and constantly poured from the eye; the quantity of discharge increasing until it becomes very great.

But enough has been said to point out the im-

portance of the disease, and the signs by which it may be recognised at its first approach.

Treatment.—Keeping the eye free from discharge, by the constant removal of the matter secreted, is what the medical attendant will chiefly insist upon; and without this is done, any treatment he may adopt will be useless; with it there is no doubt of a successful issue of the case, provided his attention has only been called to it at a sufficiently early period.

HARE-LIP.—This is a blemish too well known to require a formal description. The questions most interesting to a mother in relation to it, are,—How is her child to be nourished, that is born with it? and when ought an operation to be performed for its removal?

The mode of feeding the infant.—If the defect is but trifling, the infant will be able to suck, provided the mother's nipple is large, and the milk flows freely from it. If this is not the case, the difficulty may be obviated by using the cork nipple shield spoken of at page 47. I have known this to answer the purpose admirably, when the mother had previously despaired of nursing her infant, the nipple being too small for it to grasp.

If, however, the defect exists in a still greater degree, feeding by means of the spoon must be resorted to; the greatest care being necessary as

to the quantity, quality, and preparation of the food. For instruction upon these points, see "Artificial Feeding," page 40.

Caution in reference to the operation.—With regard to the operation for the removal of this deformity, I would strongly warn parents against desiring its too early performance. Various considerations contribute to make the distressed parents anxious for this. But very seldom indeed—except the deformity be very great, and implicating other parts beside the lip—will the operation be required, or ought it to be resorted to, before the second year and a half of the infant's life; and for this, very cogent reasons exist. For instance, convulsions may thus be induced, which often terminate fatally.

The most proper age for removing this deformity by operation is from that of two years and a half to four years.

BLEEDING FROM THE NAVEL-STRING.—Bleeding from the navel-string will sometimes take place hours after it has been supposed to be carefully secured. This will arise, either from the cord being carelessly tied, or from its being unusually large at birth, and in a few hours shrinking so much that the ligature no longer sufficiently presses on the vessels. In either case, it is of importance that the attendants in the lying-in-room

should understand how to manage this accident when it occurs, that it may not prove injurious or fatal to the child.

The mode of arresting the bleeding. — The clothes of the child and the flannel roller must be taken off; — the whole cord without delay must be unwrapped, and then a second ligature be applied below the original one, (viz. nearer to the body of the infant,) taking great care that it shall not cut through the cord when drawn very tight, but at the same time drawing it sufficiently tight to compress the vessels.

The ligature should be composed of fine linen threads, three or four thicknesses, and not of tape or bobbin, or any substance of this nature, as it cannot be relied on for this purpose.

ULCERATION, OR IMPERFECT HEALING OF THE NAVEL. — The cord separates from the navel generally some time between the fifth and fifteenth day from delivery, and the part usually heals without giving the slightest trouble.

This, however, is not always the case, for sometimes a thin discharge will take place, which, if the part be examined, will be found to proceed from a small growth about the size, perhaps, of a pea, or even less. This must be removed by applying a little powdered alum, — or, if this fail, it should be once or twice slightly touched with

blue-stone, and afterwards dressed with calamine cerate.

At other times, though fortunately very rarely, excoriation of the navel and the parts around takes place, which quickly spreads, and assumes an angry and threatening character. If, however, the attention of the medical man is called to it early, it will always do well: until his directions are given, apply a nicely made bread and water poultice.

BLEEDING FROM THE NAVEL.—A day or two after the cord separates, or at the time of separation, bleeding may take place from the navel; fortunately, this rarely occurs; and I only mention it, to observe that, upon its occurrence, the point of the finger should be placed over the part, and pressure steadily applied until medical assistance is obtained.

Now and then, in these cases, a growth sprouts up and bleeds. Let this be touched with lunar caustic, or any other astringent application, or let pressure be employed, still it will bleed,—not freely or in a stream, but there will be a constant drain from the part, and the infant, as a consequence, will waste, and be brought to death's door. Excise it, it will only make matters worse. The treatment in this case consists in simply winding a piece of very narrow tape round the

growth, and then leaving it untouched. The bleeding will soon cease; the fungus will sprout over the upper margin of the tape; in a very short time it will, as it were, strangle the disease, which subsequently falling off, a complete cure is accomplished.

JAUNDICE.—It frequently happens, during the first or second week after birth, that the skin of the child becomes very yellow, and it has all the appearance of having the jaundice. This gives rise to great distress to the parent when she perceives it, and she becomes very anxious for the medical man's next visit.

Now, ordinarily, it is of no consequence; commonly disappearing spontaneously, and requiring no medical treatment. If, however, it does not go off in two or three days, a tea-spoonful of castor oil should be given once, or oftener, if necessary.

It is, of course, possible for an attack of real jaundice to occur at this early period, and a disease of a very serious nature will then have to be dealt with; but, except as a consequence of malformation (a very infrequent occurrence), it is not likely to arise; and therefore jaundice during the first and second week after delivery need not create alarm.

TONGUE-TIED.—This arises from the bridle under the tongue being so short, or its attachment to the tongue extended so near the tip, as to interfere with the motions of the organ in sucking, and, in after years, in speaking. It is *a rare occurrence*, although nothing is more common than for medical men to have infants brought to them supposed to be labouring under the above defect.

How its existence may be determined.— The best guide for a parent to determine whether it exist or not, is for her to watch whether the infant can protrude the tip of the tongue beyond the lips: if so, it will be able to suck a good nipple readily, and nothing need or ought to be done. No mother will unnecessarily expose her infant to an operation, which, unless very carefully performed, is not altogether unattended with danger; and, if she suspects any defect of this kind to exist, she has only to observe the circumstance mentioned above, to satisfy her mind upon the subject.

MOLES AND MARKS ON THE SKIN, &c.—The supposed influence of the imagination of the mother, in the production of the above appearances in the texture of the skin of her infant, has been fully discussed in the author's work "Hints to Mothers, on the Management of their Health during the Period of Pregnancy, and in the Lying-in Room;" and as this part of the subject

is foreign to the present inquiry, which chiefly has reference to the probable effect of their presence upon the health of the child, it is unnecessary again to refer to it here.

These appearances may be divided into two classes: the brownish mole, and claret-stain; and small but somewhat elevated tumours, either of a dark blue, livid colour, or of a bright vermilion hue.

Moles and stains.—They are of no importance, as far as the health of the infant is concerned. If situated in the face, however, they frequently cause great disfigurement, as the claret-stain, which may be seen sometimes to occupy nearly half the face. But they happily do not increase in size, remaining stationary through life; and as any operation that might be proposed for their removal, would only cause an equal, if not greater, deformity, they ought to be left alone.

Coloured spots or tumours. — These vary in their number, size, and situation. The same child is sometimes born with many of them. They may be as small as a pea, or as large as a crown piece. They are not only found on the skin, but on the lips, in the mouth, &c.

These, also, sometimes remain stationary in their size, having no tendency to enlarge, unless, indeed, they are subjected to friction or pressure. But as they frequently require surgical aid,—in

enamel." One of the commonest tooth-powders of the present day, and which is a very good form, is the following:—

Prepared chalk, three ounces;
Orris root, powdered, half an ounce;
Powdered myrrh, half an ounce;
Cuttle-fish, powdered, one ounce;
Essential oil of cinnamon, four drops.—Mix.

But the best of all dentifrices is the plain camphorated tooth-powder; for while the camphor does no injury to the teeth, it instantly destroys those minute creatures which produce the tartar and green incrustation on the enamel. "To promote a general cleanliness of the teeth, the fact cannot be too often repeated, that a microscopic observer, M. Mandl, has discovered that, not only the foul mucous covering of the tongue, but the tartar of the teeth, consists of the dead remains of millions of infusorial animalculæ. Leuwenhöek discovered long ago, that the mucous secretion of the human mouth abounded in living specimens of these minute beings; but it remained for M. Mandl to make known that the tartar of the teeth consists of their dead bodies compactly united together in one mass, by chemical decomposition. When a portion of this tartar of the teeth is softened in clear water, and placed under a powerful microscope, it is found to consist of their delicate skeletons."

The best preservative, then, against the formation of tartar, is to see that the child cleans his teeth thoroughly night and morning with the brush and water, and also that he rinses out the mouth after the dinner meal. And if tartar should be disposed to form, then he must in addition use tooth-powder.

If the gums should be tender, irritable, and bleed (as is frequently the case when an individual gets out of health, or the tartar accumulates) the mouth may be washed night and morning with a tumbler of tepid water, containing from ten to twenty drops of the tincture of myrrh, and the same quantity of spirits of camphor; or the following form may be used: —

Alum, one drachm and a half;
Tincture of myrrh, two drachms;
Camphor mixture, five ounces and a half.—Mix.

The use of *acids* to the teeth cannot be too strongly deprecated: they decompose their substance and lead to their rapid decay. Hence the whiteness produced by acid tooth powders and washes is not less deceitful than ruinous in its consequences. As has just been observed, they perform all that their vendors promise, causing the teeth, for a little while, to become very white and beautiful in their appearance, but at the same time injuring them irremediably; the enamel becomes gradually decomposed, the bone of the tooth

exposed, and its death is the inevitable consequence.

It is therefore of great importance when acid medicines are ordered for children that they should be taken through a glass tube, to prevent their coming in contact with the teeth. From a want of this precaution, I know a lady (and there are many such instances) who once had as sound and fine a set of teeth as any one could boast of, but from this cause has had nearly the whole of the upper row destroyed. She was in delicate health; it was judged requisite that she should take for a considerable time (with other medicines) sulphuric acid: but the glass tube was not thought of, and the consequences followed which have been described.

Calomel, as it is frequently given alone, or in the little white powders, in infancy and childhood, by mothers and nurses, is productive of serious and indeed irremediable injury to the teeth. Mr. Bell says, "The immoderate use of mercury in early infancy produces, more perhaps than any other similar cause, that universal tendency to decay, which, in many instances, destroys almost every tooth at an early age. It is certainly not unimportant to bear this fact in mind, in the administration of this *sovereign remedy*, this panacea, as many appear to consider it, in infantile diseases."

The teeth are exceedingly apt to suffer from

sudden variations of temperature. Fluids, therefore, should never be taken into the mouth so hot or so cold as to produce the slightest pain; and, for the same reason, the water with which the mouth is cleansed should in winter be always warm or tepid. When ices are taken, the precaution of placing them in the centre of the mouth, so as to prevent contact with the teeth, should be carefully observed.

There are many other causes which might be mentioned as tending to induce decay of the teeth, but their consideration here is purposely avoided. It is hoped enough has been said to draw the parent's attention to the subject of the teeth, to prevent their neglect, and yet at the same time to induce a cautious management.

PART II.

THE MATERNAL MANAGEMENT OF THE CHILD IN DISEASE.

In the previous part of this work—devoted to the general management of the child in health—I have endeavoured to teach the young mother, that the prevention of disease is her province, not its cure; that to this object all her best efforts must be directed: and, moreover, that to tamper with medicine, when disease has actually commenced, is to hazard the life of her offspring. The advantage, however, of an early and prompt application of remedies in the diseases of childhood, generally so active in their progress and severe in their character, has induced me to attempt, in this the Second Part, to point out how the first symptoms of disease may be early detected by the parent. The subject has been felt to be a difficult one, and to give particular directions, quite out of the question; but it is hoped that the suggestions thrown out will in some measure answer the important purpose intended. The maternal management of disease, however, forms the principal portion of this division of the work; a subject

which the author regards as of high and serious moment. Small as is the attention which has been hitherto paid to it, yet, in the diseases of infancy and childhood, how invaluable is a careful and judicious maternal superintendence to give effect to the measures prescribed by the physician! — how many a child is lost for want of it!

CHAPTER I.

HINTS FOR THE EARLY DETECTION OF DISEASE IN THE CHILD BY THE MOTHER.

LIFE is soon extinguished in infancy. At this epoch any disease is formidable, and must be met most promptly. It is either sudden and active in its assaults, or comes with slow and insidious approach. The first signs of its coming on are not always visible to an unpractised eye: it may have made dangerous advances before the mother's mind is awakened to its presence; and medical aid may be solicited when remedies and advice are no longer of any avail.

It is, therefore, highly important that a mother should possess such information as will enable her to detect disease at its first appearance, and thus insure for her child timely medical assistance, and

spare herself those painful, but unavailing regrets, which would infallibly await her from a supposed neglect. This knowledge it will not be difficult for her to obtain. She has only to become familiar with those indications which constitute health, and she will for the most part be able to detect the first appearances of disease.

SECT. I. — SIGNS OF HEALTH.

The signs of health are to be found, first, in the healthy performance of the various functions of the body; the regular demands made for its supply, neither in excess nor deficiency; and a similar regularity in its excretions both in quantity and appearance.

If the figure of the healthy infant is observed, something may be learnt from this. There will be perceived such an universal roundness in all parts of the child's body, that there is no such thing as an angle to be found in the whole figure; whether the limbs are bent or straight, every line forms a portion of a circle. The limbs will feel firm and solid, and unless they are bent, the joints cannot be discovered.

The tongue, even in health, is always white, but it will be free from sores, — the skin cool, — the eye bright, — the complexion clear, — the

head cool, — and the abdomen not projecting too far, — the breathing regular, and without effort.

When awake, the infant will be cheerful and sprightly, and, loving to be played with, will often break out into its merry, happy, laugh; whilst, on the other hand, when asleep, it will appear calm, every feature composed, its countenance displaying an expression of happiness, and frequently, perhaps, lit up with a smile.

SECT. II. — SIGNS OF DISEASE.

Just in proportion as the above appearances are present and entire, health may be said to exist; and just in proportion to their partial or total absence disease will have usurped its place.

We will, however, for the sake of clearness examine the signs of disease as they are manifested separately by the countenance, — the gestures, — in sleep, — in the stools, — in the cry, — and by the breathing and cough.

THE COUNTENANCE. — In health, the countenance of a child is expressive of serenity in mind and body; but if the child be unwell, this expression will be changed, and in a manner which, to a certain extent, will indicate what part of the system is at fault.

less than eight or even ten firm teeth forcibly removed from the jaws of a child at once, when there was not the slightest reason to apprehend any evil result from their being left alone." Here there was a most cruel, because unnecessary infliction of pain, as well as great hazard incurred of seriously injuring the permanent teeth by interfering with the secretion of their enamel. And besides all this there is another and yet greater evil, for, if the temporary teeth be removed, before the permanent ones are so advanced as to be ready to occupy their situation, the arch of the jaw will assuredly contract, and when, subsequently, the permanent teeth are fully formed, there will not be room for them to range in their proper situation. Thus the operation which was intended to prevent irregularity, becomes the cause of its occurrence, and that in its very worst form, producing a want of accordance between the size of the teeth and that of the jaw.

The eye-teeth generally occasion most anxiety to a parent, from the prominent position in which they present themselves; but in the majority of cases nothing but time is required to reduce them to their proper station. But, whatever may be the peculiarities of each individual case, the dentist will decide what may be required; only, I would again repeat, do not neglect the occasional inspection of the mouth at this age, if you

regard the future comfort and appearance of your child.

Means to be used for their preservation. — The preservation of the teeth requires attention to several points; the first and principal of which is, to enforce the habit in the child of thoroughly cleaning the teeth by means of water and a brush night and morning, and rinsing out the mouth after his dinner meal. The brush should not be very hard, as it will not only be more difficult to clean the interstices between the teeth, the part in which the tartar is most likely to be deposited, but by its friction will occasion the gradual absorption of the gum and the exposure of the neck of the teeth. The hair of the brush should be firm and elastic, and not too closely set. If there is a tendency to the formation of *tartar*, then it will be necessary to have recourse to some tooth-powder. Tooth-powders, however, must be chosen with care, as many of them are composed of substances highly injurious to the teeth. Mr. Bell says, "many of the tooth-powders which are offered for sale, with the promise of rendering the teeth beautifully white, perform, for a time, all that is promised, at the expense of permanent and irremediable injury to the teeth; for they often contain a quantity of tartaric or other acid, which effects a gradual decomposition of the

These signs will sometimes manifest themselves many hours, nay days, before the attack occurs; may be looked upon as premonitory; and if timely noticed, and suitable medical aid resorted to, the occurrence of a fit may be altogether prevented.

The state of the eyes should always be attended to. In health they are clear and bright, but in disease they become dull, and give a heavy appearance to the countenance; though after long continued irritation they will assume a degree of quickness which is very remarkable, and a sort of pearly brightness which is better known from observation than it can be from description.

The direction of the eyes, too, should be regarded, for from this we may learn something. When the infant is first brought to the light, both eyes are scarcely ever directed to the same object: this occurs without any tendency to disease, and merely proves that, regarding one object with both eyes is only an acquired habit. But when the child has come to that age when the eyes are by habit directed to the same object, and afterwards it *loses* that power, this circumstance alone may be looked upon as a frequent prelude to disease affecting the head.

THE GESTURES.—The gestures of a healthy child are all easy and natural; but in sickness

those deviations occur, which alone will often denote the nature of the disease.

Suppose an infant to have acquired the power to support itself, to hold its head erect; let sickness come, its head will droop immediately, and this power will be lost, only to be regained with the return of health; and during the interval every posture and movement will be that of languor.

The little one that has just taught itself to run alone from chair to chair, having two or three teeth pressing upon and irritating the gums, will for a time be completely taken off its feet, and perhaps lie languidly in its cot, or on its nurse's arm.

The legs being drawn up to the belly, and accompanied by crying, are proofs of disorder and pain in the bowels. Press upon this part, and your pressure will increase the pain. Look to the secretions from the bowels themselves, and by their unhealthy character your suspicions, in reference to the seat of the disorder, are at once confirmed.

The hands of a child in health are rarely carried above its mouth; but let there be any thing wrong about the head and pain present, and the little one's hands will be constantly raised to the head and face.

Sudden starting when awake, as also during

sleep, though it occur from trifling causes, should never be disregarded. It is frequently connected with approaching disorder of the brain. It may forebode a convulsive fit, and such suspicion is confirmed, if you find the thumb of the child drawn in and firmly pressed upon the palm, with the fingers so compressed upon it, that the hand cannot be forced open without difficulty. The same condition will exist in the toes, but not to so great a degree; there may also be a puffy state of the back of the hands and feet, and both foot and wrist bent downwards.

There are other and milder signs threatening convulsions and connected with gesture, which should be regarded: — the head being drawn rigidly backwards,—an arm fixed firmly to the side, or near to it,—as also one of the legs drawn stiffly upwards. These signs, as also those enumerated above, are confirmed beyond all doubt, if there be present certain alterations in the usual habits of the child:—if the sleep is disturbed,—if there be frequent fits of crying,—great peevishness of temper,—the countenance alternately flushed and pale,—sudden animation followed by as sudden a fit of languor,—catchings of the breath followed by a long and deep inspiration,—all so many premonitory symptoms of an approaching attack.

THE SLEEP. — The sleep of the infant in

health is quiet, composed, and refreshing. In very early infancy, when not at the breast, it is for the most part asleep in its cot; and although as the months advance it sleeps less, yet when the hour for repose arrives, the child is no sooner laid down to rest, than it drops off into a quiet, peaceful slumber.

Not so, if ill. Frequently it will be unwilling to be put into its cot at all, and the nurse will be obliged to take the infant in her arms; it will then sleep but for a short time, and in a restless and disturbed manner.

If it suffer pain, however slight, the countenance will indicate it; and, as when awake, so now, if there is anything wrong about the head, the contraction of the eyebrow and grinding of the teeth will appear; if any thing wrong about the belly, the lips will be drawn apart, showing the teeth or gums,—and in both instances there will be great restlessness and frequent startings.

THE STOOLS.—In the new-born infant the motions are dark-coloured, very much like pitch both in consistence and appearance. The first milk, however, secreted in the mother's breast, acts as an aperient upon the infant's bowels, and thus, in about four-and-twenty hours, it is cleansed away; or if it should not, a tea-spoonful of castor oil accomplishes this purpose.

From this time, and through the whole of infancy, the stools will be of a lightish yellow colour, the consistence of thin mustard, having little smell, smooth in appearance, and therefore free from lumps or white curded matter, and passed without pain or any considerable quantity of wind. And as long as the child is in health, it will have daily two or three, or even four, of these evacuations. But as it grows older, they will not be quite so frequent; they will become darker in colour, and more solid, though not so much so as in the adult.

Any deviation, then, from the above characters, is of course a sign of something wrong; and as a deranged condition of the bowels is frequently the first indication we have of coming disease, the nurse should daily be directed to watch the evacuations. Their appearance, colour, and the manner in which discharged, are the points principally to be looked to. If the stools have a very curdy appearance, or are too liquid, or green, or dark-coloured, or smell badly, they are unnatural. And in reference to the manner in which they are discharged, it should be borne in mind, that, in a healthy child, the motion is passed with but little wind, and as if *squeezed* out, but in disease, it will be thrown out with considerable force, which is a sign of great irritation. The number, too, of stools passed within the four-and-twenty hours it

is important to note, so that if the child does not have its accustomed relief, (and it must not be forgotten that children, although in perfect health, differ as to the precise number,) a little castor oil may be at once exhibited, and thus mischief be prevented.

This, however, is not the place to discuss the question of disordered bowels, but simply to point out how this circumstance may be known.*

THE CRY. — By crying the infant, for the most part, manifests its sensations and wants. A parent, therefore, should learn to distinguish with accuracy *that* cry which denotes hunger, and *that* which proceeds from pain and other causes. It is important a young mother's attention should be directed to this subject, if it were only to guard her from falling into the common and most injurious error of looking upon every cry of her offspring as an indication of hunger, a mistake often fraught with fatal results.

The cry of hunger may be easily recognised by a little observation. An infant awakening, and needing the breast, will generally show certain signs of hunger before it cries for food. It will put out its tongue, move its head about as if in search of the breast, and if at this moment the

* See section on Disorders of the Stomach and Bowels, p. 231.

mother comes in sight, thoroughly arousing himself, he will manifest his joy at seeing her, and eagerly take his meal; but if, on the other hand, she is not present, and these signs are not heeded, the cry will begin, and continue, much in the same tone, until the supply is obtained. Now these signs are not present when the cry is occasioned by some other cause. The child, it is true, will take the breast when offered, *but it does not ask for it;* and it will become quiet as soon as put there; but this composure will be of short duration, for as soon as it is taken from it, its lamentations will be resumed with redoubled violence.

The cry of discomfort will with some children be frequent enough, the most trifling causes producing it. Thus, some temporary inconvenience from posture: — the child has been lying long in one position, and has grown tired of it; some slight pain or uneasiness caused by a rucking or pressure in some portion of its dress; or perhaps positive pain, though slight enough, from the pricking of a pin: — these and many other causes of a slight and passing kind will be continually occurring, and no mother will have difficulty in detecting the exciting cause, and at once removing it.

The cry of pain and suffering is variously expressed. If a child, usually placid and cheerful,

gets fretful, fractious, and crying with its little fingers continually going to its mouth, this denotes pain caused by some new coming tooth pressing against a tender and inflamed gum. If a child, not accustomed to cry much, on some occasion is perpetually crying, this denotes some continued, recurring, painful sensation somewhere, and demands medical attention to detect and remove the cause. If a child cry violently, this denotes the presence of severe pain, unless it be the effect of passion. If it be from pain, and you find at the same time the child incessantly drawing up its legs towards its body, it is a sign that it is suffering from disorder and pain in its bowels. This may either be trifling in degree, caused by spasm, the result of slight irritation, possibly the effect of over-feeding (the most frequent cry of infancy), to be relieved perhaps by the gentle friction of a warm hand before the fire (and not by putting to the breast), or, it may have a much more serious origin, and is not thus to be removed, pointing out the necessity for prompt professional attention. If the violent fit of crying be simply the effect of temper (and a discerning mother will readily perceive the difference), the child will sometimes hold its breath, until the recovery of it seems doubtful, and it will get black in the face. To remedy this, plunge the hand or both into cold water; this will induce

gasping or sighing, and so the breath is again fully drawn.

The flow of tears seems only to attend the mental feelings, or emotions, as they are called, and to be one of the chief signs of their activity. It therefore becomes possible to distinguish the cry of temper and self-will from that of simple bodily suffering, which has no tears. *This* must be inquired into; *the other* ought to be neglected. Even young children are gratified by the attention paid to their fits of naughtiness, and are less likely to repeat them if experience teaches them that they are not attended to.

Moaning, or the plaintive cry which characterizes some diseases, needs no description: it will not escape the observation of a kind mother.

These varieties then of infantile cry, with their accompanying signs, are all more or less important and are easily detected. If it is the result of hunger, the breast must be given and only then; if excited by some temporary inconvenience, the cause of it should be sought for and be removed; — if caused by pain excited by disease, the mother by detecting it will early seek medical aid, and will thus very frequently prevent serious indisposition to her child, greatly abridge the duration and violence of the attack if it take place, or if she have to endure the poignant grief of the loss of

her little one, will at least be spared the unavailing but most painful regrets of supposed neglect.

THE BREATHING. — The breathing of a child in health is formed of equal inspirations and expirations, and it breathes quietly, regularly, inaudibly, and without effort. But let inflammation of the air-tubes or lungs take place, and the respiration will become in a few hours so quickened and hurried, and perhaps audible, that the attention has only to be directed to the circumstance to be at once perceived.

Now all changes which occur in the breathing from its healthy standard, however slight the shades of difference may be, it is most important should be noticed early. For many of the complaints of the chest, although very formidable in their character, if only seen early by the medical man, may be arrested in their progress; but otherwise may be beyond the control of art. A parent, therefore, should make herself familiar with the breathing of her child in health, and she will readily mark any change which may arise.

OF COUGH. — Of this symptom I should not have said any thing in this chapter, as it can never fail to be noticed, except that it is highly necessary to throw out one caution. Whenever a child has the symptoms of a common cold, attended by

hoarseness and *a rough cough*, always look upon it with suspicion, narrowly watch the child, and never neglect seeking a medical opinion. Hoarseness does not usually attend a common cold in a very young child, and these symptoms may be premonitory of an attack of "croup;" a disease excessively rapid in its progress, and which, from the importance of the parts affected, carrying on, as they do, a function indispensably necessary to life, requires the most prompt and decided treatment.

The following observations of Dr. Cheyne are so strikingly illustrative, and so pertinent to my present purpose, that although they will be again referred to, I cannot refrain inserting them here: — "In the approach of an attack of croup, which almost always takes place in the evening, probably of a day during which the child has been exposed to the weather, and often after catarrhal symptoms have existed for several days, he may be observed to be excited, in variable spirits, more ready than usual to laugh than to cry, a little flushed, occasionally coughing, the sound of the cough being rough, like that which attends the catarrhal stage of the measles. More generally, however, the patient has been for some time in bed and asleep, before the nature of the disease with which he is threatened is apparent; then, perhaps, without waking, he gives a very unusual cough, well

known to any one who has witnessed an attack of the croup; it rings as if the child had coughed through a brazen trumpet; it is truly a *tussis clangosa;* it penetrates the walls and floor of the apartment, and startles the experienced mother,—'Oh! I am afraid our child is taking the croup!' She runs to the nursery, finds her child sleeping softly, and hopes she may be mistaken. But remaining to tend him, before long the ringing cough, a single cough, is repeated again and again; the patient is roused, and then a new symptom is remarked; the sound of his voice is changed; puling, and as if the throat were swelled, it corresponds with the cough," &c.

How important that a mother should be acquainted with the above signs of one of the most terrific complaints to which childhood is subject; for, if she only send for medical assistance during its first stage, the treatment, if vigorous and judicious, will be almost invariably successful; whereas, if this "golden opportunity" is lost, this disease will seldom yield to the influence of measures, however wisely chosen or perseveringly employed.

SECT. III. — OTHER CIRCUMSTANCES WHICH WILL ASSIST IN THE EARLY DETECTION OF DISEASE.

1. *The influence of the seasons in producing particular forms of disorder.*— The recollection of the fact, that at the different seasons of the year some diseases are more prevalent than at other periods, will greatly aid a judicious parent in the early detection of the presence of disorder, and its kind, in her child.

Thus, in *the early part of the winter,* what is called catarrh, viz. an increased secretion of mucus from the membranes of the nose, fauces, and air-tubes, with fever, and attended with sneezing and cough, thirst, lassitude, and want of appetite, is generally prevalent.

As the winter advances, the air-tubes of the lungs, and the lungs themselves, are liable to become the seat of disorder; and those signs will present themselves, which have been pointed out in the previous section as characteristic of such attacks.

In the spring, we have still the same diseases prevalent, and in addition, measles, scarlet fever, small-pox, and chicken pox, which increase in liability towards the close of this season, and with the first weeks of summer.

In the summer, disease is less prevalent than at

any other period of the year; but towards its middle and close, and through the whole of the autumnal months, bowel complaints may be expected, in the forms of diarrhœa, cholera, and dysentery.

2. *The influence of an hereditary predisposition to certain diseases.* — Without entering into this subject at large, still it may be useful to remark, that in some families there is a predisposition to some diseases, which, occurring in the first child, will, as each succeeding child is born, attack at the same age. Amongst other diseases of this class are, croup, hooping-cough, and water in the head.

This observation should not only lead a mother to be alive to the possibility of the successional occurrence of these diseases in her family, and so early note their appearance, and seek medical advice, but should at the same time make her most anxious, on the one hand, to shield her child from all their exciting causes, and on the other, to adopt those measures which may contribute indirectly to overcome the constitutional predisposition to them.

Of the *scrofulous constitution*, I will merely mention here, that it is of the greatest importance, where a predisposition to this disease exists in a

family, that a mother should immediately attend to any alteration in the gait or contour of her child, and give prompt attention also to any complaint made of swelling about a joint, although it may be unattended with pain. The importance of this remark will be seen by contrasting the result of the following cases which occurred in children of the same family.

CASE I.

A. B., a female child, having blue eyes, light hair, and a fair complexion, in the early part of the year 1838, being then two years of age, had an enlargement of the left knee joint. *For some weeks previous to this time, there had been a degree of heat about the part; but as no pain apparently existed, it was not regarded as of any consequence, and nothing was done.* The child living in the neighbourhood of London, was afterwards placed under medical treatment. Two or three months having elapsed, it was brought to town, and shown to me, in consequence of a slight tumefaction over the lower part of the spine. This soon disappeared under the measures employed, and eventually the disease of the knee (evidently scrofulous) was arrested, so that now the case promises to be cured; but the joint will for ever be stiff, and the limb thus affected shorter than the other.

CASE II.

G. B., the brother of the above, a handsome boy, with light hair, fine blue eyes, — indeed, very much like his little sister, — in the year 1836, had enlargements of the glands in his neck, which were relieved by the treatment resorted to.

In April, 1839, being then eight years old, he was observed by his mother to limp slightly in walking, but complained of little or no pain. From the caution, however, which had been given to the parent at the time I was consulted about the previous case, to notice at an early period any symptom of this nature in her children, *the fact was immediately attended to.* The affection was evidently in the hip; there was imperfection in the gait, and pain upon pressing over the joint. A blister was applied, perfect rest to the limb enjoined, and steel medicines ordered; and in a fortnight the motions of the joint were restrained more effectually by the application of strips of soap plaster and a bandage. In three months the child was ordered to the sea-side, and eventually was able to walk without the slightest limp or pain, and may be said to be quite well.

I would not say that in the first case, if the disease had been discovered early, and at that time

met by judicious medical treatment, a stiff knee and shortened limb would have been prevented, although this is my belief; — but in reference to the latter case, I have no hesitation in saying that, without the disease had been early detected by the mother, and as promptly attended to by her, the remedial measures might have failed, — certainly the result would not have been so highly satisfactory as it was.

CHAPTER II.

ACCIDENTS AND DISEASES.

THE especial province of the mother is the prevention of disease, not its cure. To the establishment and carrying out of this principle, every word contained in the preceding pages has directly or indirectly tended.

This, however, is not all. When disease attacks the child, the mother has then a part to perform, which it is especially important during the epochs of infancy and childhood should be done well. I refer to those duties which constitute the maternal part of the management of disease.

Medical treatment, for its successful issue, is greatly dependent upon a careful, pains-taking, and judicious maternal superintendence. No medical treatment can avail at any time, if directions be only partially carried out, or be negligently attended to; and will most assuredly fail altogether, if counteracted by the erroneous prejudices of ignorant attendants. But to the affections of infancy and childhood, this remark applies with

great force; since, at this period, disease is generally so sudden in its assaults, and rapid in its progress, that unless the measures prescribed are rigidly and promptly administered, their exhibition is soon rendered altogether fruitless.

The amount of suffering, too, may be greatly lessened by the thoughtful and discerning attentions of the mother. The wants and necessities of the young child must be anticipated; the fretfulness produced by disease, soothed by kind and affectionate persuasion; and the possibility of the sick and sensitive child being exposed to harsh and ungentle conduct, carefully provided against.

Again, not only is a firm and strict compliance with medical directions in the administration of remedies, of regimen, and general measures, necessary, but an unbiassed, faithful, and full report of symptoms to the physician, when he visits his little patient, is of the first importance. An ignorant servant or nurse, unless great caution be exercised by the medical attendant, may, by an unintentional but erroneous report of symptoms, produce a very wrong impression upon his mind, as to the actual state of the disease. His judgment may, as a consequence, be biassed in a wrong direction, and the result prove seriously injurious to the well-doing of the patient. The medical man cannot sit hour after hour watching symptoms; hence the great importance of their

being faithfully reported. This can alone be done by the mother, or some person equally competent.

There are other weighty considerations which might be adduced here, proving how much depends upon efficient maternal management in the time of sickness; but they will be severally dwelt upon, when the diseases with which they are more particularly connected are spoken of.

It is the object, then, of this chapter to point out what constitutes the maternal management of the accidents and diseases of children.

SECT. I. — ACCIDENTS AND DISEASES WHICH MAY OCCUR TO THE INFANT AT BIRTH, OR SOON AFTER.

STILL-BORN. — Sometimes the child comes into the world apparently dead, and, unless the most active exertions are made by the attendants, is lost. The superintendence of the means used devolves upon the medical man; but it would be often well if his assistants were already acquainted with the measures pursued under these circumstances, for they would be more likely to be carried into effect with promptitude and success, than they now frequently are. And again, the still-born child is frequently in this state from having been born very rapidly, and before the

medical man can have arrived; it will be more especially useful in such a case, that the attendants in the lying-in-room should know how to proceed.

The various causes producing this condition it is unnecessary to mention.

The condition itself may exist in a greater or less degree: the infant may be completely still-born, with no indication of life, except, perhaps, the pulsation of the cord, or a feeble action of the heart;—or it may make ineffectual efforts at breathing, or even cry faintly, and yet subsequently perish for want of strength to establish perfectly the process of respiration. Under all these circumstances, a good deal can often be effected by art. In every instance, therefore, in which we have not positive evidence of the child being dead, in the existence of putrefaction, or of such malformation as is incompatible with life, it is our duty to give a fair trial to the means for restoring suspended animation; and as long as the slightest attempt at motion of the respiratory organs is evinced, or the least pulsation of the heart continues, we have good grounds for persevering and hoping for ultimate success.

The measures to be employed to restore a still-born child will be a little modified by the circumstances present.

If there is no pulsation — no beating in the cord,

when the child comes into the world, it may at once be separated from the mother. This is to be effected by first tying the navel-string with common sewing thread (three or four times doubled), about two inches from the body of the child, and again two inches from the former ligature, and then dividing the cord with a pair of scissors between the two. And now the means for its restoration are to be made use of, which are detailed below, viz. inflation of the lungs, and perhaps the warm bath. If, with the above circumstances, the child's face be livid and swollen, some drops of blood should previously be allowed to escape before the ligature is applied to that part of the navel-string which is now only attached to the child.

If there is pulsation in the cord, but respiration is not fully established, it must not be divided; and as long as pulsation continues, and the child does not breathe perfectly and regularly, no ligature should be applied. The first thing to be done here, is to pass the finger, covered with the fold of a handkerchief or soft napkin to the back of the child's mouth, to remove any mucus which might obstruct the passage of air into the lungs, and at the same time to tickle those parts, and thereby excite respiratory movements. The chest should then be rubbed by the hand, and a gentle shock given to the body by slapping the back. If

these means fail, the chest and soles of the feet must next be rubbed with spirits, the nostrils and back of the throat irritated with a feather previously dipped in spirits of wine, and ammonia or hartshorn may be held to the nose.

Inflation of the lungs. — The above means not having been successful, and the pulsation in the cord having ceased, the infant must be separated, and inflation of the lungs resorted to. This is to be effected gently and cautiously as follows: —

The child, wrapped in flannel, is to be laid on its back upon a table placed near the fire. Its head is to be slightly extended, and the nostrils held between the fingers and thumb of one hand, whilst with the fingers of the other slight pressure is to be made upon the pit of the stomach, so as to prevent the air from passing into that organ. The lungs of the child are now to be filled with air, by the operator applying his own lips — with a fold of silk or muslin intervening, for the sake of cleanliness — to those of the child, and then simply blowing in its mouth, he is to propel the air from his own chest into that of the infant. Previously, however, to his doing this, he should make several deep and rapid inspirations, and, finally, a full inspiration, in order to obtain greater purity of air in his own lungs.

When the chest of the child has been thus distended, it is to be compressed gently with the

hand, so as to empty the lungs; and then the inflation, with the alternately compressing the chest, must be repeated again and again, until either the commencement of *natural respiration* is announced by a sneeze or deep sigh, or until after *long-continued, steady, persevering,* but unavailing efforts to effect this object shall have removed all ground of hope for a successful issue.

Whilst these efforts are being made, some other individual must endeavour to maintain or restore the warmth of the infant's body, by gently but constantly pressing and rubbing its limbs between his warm hands. And after respiration is established, the face must still be freely exposed to the air, whilst the warmth of the limbs and body is carefully sustained.

It will sometimes happen—and to this circumstance the operator should be fully alive—that when the child begins to manifest symptoms of returning animation, its tongue will be drawn backwards and upwards against the roof of the mouth, filling up the passage to the throat, and preventing further inflation of the lungs. This is to be remedied by the introduction of the forefinger to the upper and back part of the child's tongue, and gently pressing it downwards and forwards, by which the difficulty will be removed, and the air again passes.

The warm bath—More reliance may be placed

upon the above measure to restore animation, than upon the warm bath. Still this is sometimes useful, and therefore must not be neglected. Whilst inflation is going on, the bath may be got ready, then resorted to, and if unsuccessful, inflation may and ought again to be followed up. We should not relinquish our endeavours at resuscitation under two or three hours, or even longer; and if ultimately successful, the state of the infant should be carefully watched for two or three days.

If the bath is useful at all, it will be so immediately upon putting the infant into it; respiration will be excited followed by a cry; and if this does not occur at once, it would be wrong to keep the child longer in the bath, as it would be only losing valuable time which ought to be devoted to other efforts. The temperature of the bath should be about 100°; and if, upon plunging the infant into it, it fortunately excite the respiratory effort, it should then be taken out, rubbed with dry but hot flannels, and, when breathing is fully established, laid in a warm bed, or, what is still better, in its mother's bosom; letting it, however, have plenty of air.

INJURIES RECEIVED DURING BIRTH. — If a labour be long and tedious, the head and body of the child may be bruised and disfigured.

The shape of the head is frequently altered by the compression it has undergone, so that it may be elongated, and measure from the chin to the back of the head as much as six or seven inches. This always excites surprise, sometimes apprehension, in the minds of the attendants: there is no ground for it. It must be allowed to regain its natural shape without interference.

Tumours or swellings upon the head are very common. They arise from pressure upon the part during the labour. The only treatment that is required, or safe, is, freedom from all pressure, and the application of cold lotions composed of brandy or vinegar and water. The swelling will gradually subside. It will be right to direct the attention of the medical man to this circumstance.

The face may be frightfully disfigured from the above cause, exceedingly black, and the features distorted. Nothing is necessary here; in a few days the face will recover its proper appearance.

RETENTION OF URINE. — Occasionally an infant will not pass any urine for many hours after its birth. This most frequently arises from the fact of none being secreted. In the last case of this kind that I was called to, three days had apsed since birth, and no urine had been passed; it proved that none had been secreted. Some-

times, however, it is the effect of another cause, which the use of the warm bath will be found to remove, which should always therefore be employed four and twenty hours after the birth of the infant, if it has not by that time passed any water.

It now and then happens, but fortunately very rarely, that some physical obstruction exists. It is always important, therefore, for the nurse to pay attention to the above point; and it is her duty to direct the attention of the medical man to the subject, if anything unusual or unnatural be present. The same observation applies to the bowel also; and if twelve hours pass without any motion, the parts should be examined.

SWELLING OF THE BREASTS. — At birth, or two or three days subsequently, the breasts of the infant will frequently be found swollen, hard, and painful, containing a fluid much resembling milk. Some nurses endeavour to squeeze this out, and thus do great mischief; for by this means inflammation is excited in the part, and sometimes abscess is the result.

If the breasts are simply slightly enlarged, it is unnecessary to do any thing more than rub them occasionally and very gently with warm almond oil, and a little time will restore them to their proper size.

If, however, they are inflamed, hot, painful, with a red surface, and unusually large, a bread and water poultice must be applied every three or four hours, which will generally prevent either the formation of matter, or any other unpleasant consequence. In a few days, under this treatment, they will usually subside, and be quite well.

INFLAMMATION OF THE EYES. — About the second or third day after the child's birth, an inflammation sometimes attacks the eye, which is of considerable consequence. The more so, from its commencing in a way not calculated to excite the attention, or alarm the fears, of the mother or nurse. The child cannot express its sensations, and the swelling of the eye conceals the progress of the disease, so that serious mischief is frequently done before the medical man sees the patient. In the first place, the inflammation is not immediately noticed; and, in the second, the measures employed are frequently insufficient to check its progress: hence it causes more blindness (I refer to the lower classes of society more particularly) than any other inflammatory disorder that happens to the eye; and the number of children is very considerable, whose sight is partially or completely destroyed by it. The parent or nurse is apt to suppose, when this in-

flammation first appears, that it is merely a cold in the eye, which will go off; and the consequences which I have just mentioned take place, in many cases, before they are aware of the danger, and before the medical man is resorted to for assistance.

I only desire, in mentioning this complaint, to inform the attendants of the lying-in-room of its great importance, that it may not be trifled with, that upon its first approach the physician may be informed of it, and that the treatment he directs for its cure may be sedulously and rigidly followed.

Symptoms. — The inflammation commonly comes on about three days after birth, but it may take place at a later period. It may be known by its commencing thus: — When the child wakes from sleep, the eyelids will be observed to stick together a little; their edges will be redder than natural, and especially at the corners; the child experiences pain from the access of light, and therefore shuts the eye against it. A little white matter will also be observed lying on the inside of the lower lid. After a short time, the lids swell, become red on their external surface, and a large quantity of matter is secreted, and constantly poured from the eye; the quantity of discharge increasing until it becomes very great.

But enough has been said to point out the im-

portance of the disease, and the signs by which it may be recognised at its first approach.

Treatment.—Keeping the eye free from discharge, by the constant removal of the matter secreted, is what the medical attendant will chiefly insist upon; and without this is done, any treatment he may adopt will be useless; with it there is no doubt of a successful issue of the case, provided his attention has only been called to it at a sufficiently early period.

HARE-LIP.—This is a blemish too well known to require a formal description. The questions most interesting to a mother in relation to it, are,—How is her child to be nourished, that is born with it? and when ought an operation to be performed for its removal?

The mode of feeding the infant.—If the defect is but trifling, the infant will be able to suck, provided the mother's nipple is large, and the milk flows freely from it. If this is not the case, the difficulty may be obviated by using the cork nipple shield spoken of at page 47. I have known this to answer the purpose admirably, when the mother had previously despaired of nursing her infant, the nipple being too small for it to grasp.

If, however, the defect exists in a still greater degree, feeding by means of the spoon must be resorted to; the greatest care being necessary as

to the quantity, quality, and preparation of the food. For instruction upon these points, see "Artificial Feeding," page 40.

Caution in reference to the operation.—With regard to the operation for the removal of this deformity, I would strongly warn parents against desiring its too early performance. Various considerations contribute to make the distressed parents anxious for this. But very seldom indeed—except the deformity be very great, and implicating other parts beside the lip—will the operation be required, or ought it to be resorted to, before the second year and a half of the infant's life; and for this, very cogent reasons exist. For instance, convulsions may thus be induced, which often terminate fatally.

The most proper age for removing this deformity by operation is from that of two years and a half to four years.

BLEEDING FROM THE NAVEL-STRING.—Bleeding from the navel-string will sometimes take place hours after it has been supposed to be carefully secured. This will arise, either from the cord being carelessly tied, or from its being unusually large at birth, and in a few hours shrinking so much that the ligature no longer sufficiently presses on the vessels. In either case, it is of importance that the attendants in the lying-in-room

should understand how to manage this accident when it occurs, that it may not prove injurious or fatal to the child.

The mode of arresting the bleeding. — The clothes of the child and the flannel roller must be taken off; — the whole cord without delay must be unwrapped, and then a second ligature be applied below the original one, (viz. nearer to the body of the infant,) taking great care that it shall not cut through the cord when drawn very tight, but at the same time drawing it sufficiently tight to compress the vessels.

The ligature should be composed of fine linen threads, three or four thicknesses, and not of tape or bobbin, or any substance of this nature, as it cannot be relied on for this purpose.

ULCERATION, OR IMPERFECT HEALING OF THE NAVEL. — The cord separates from the navel generally some time between the fifth and fifteenth day from delivery, and the part usually heals without giving the slightest trouble.

This, however, is not always the case, for sometimes a thin discharge will take place, which, if the part be examined, will be found to proceed from a small growth about the size, perhaps, of a pea, or even less. This must be removed by applying a little powdered alum, — or, if this fail, it should be once or twice slightly touched with

blue-stone, and afterwards dressed with calamine cerate.

At other times, though fortunately very rarely, excoriation of the navel and the parts around takes place, which quickly spreads, and assumes an angry and threatening character. If, however, the attention of the medical man is called to it early, it will always do well: until his directions are given, apply a nicely made bread and water poultice.

BLEEDING FROM THE NAVEL.—A day or two after the cord separates, or at the time of separation, bleeding may take place from the navel; fortunately, this rarely occurs; and I only mention it, to observe that, upon its occurrence, the point of the finger should be placed over the part, and pressure steadily applied until medical assistance is obtained.

Now and then, in these cases, a growth sprouts up and bleeds. Let this be touched with lunar caustic, or any other astringent application, or let pressure be employed, still it will bleed,—not freely or in a stream, but there will be a constant drain from the part, and the infant, as a consequence, will waste, and be brought to death's door. Excise it, it will only make matters worse. The treatment in this case consists in simply winding a piece of very narrow tape round the

growth, and then leaving it untouched. The bleeding will soon cease; the fungus will sprout over the upper margin of the tape; in a very short time it will, as it were, strangle the disease, which subsequently falling off, a complete cure is accomplished.

JAUNDICE.—It frequently happens, during the first or second week after birth, that the skin of the child becomes very yellow, and it has all the appearance of having the jaundice. This gives rise to great distress to the parent when she perceives it, and she becomes very anxious for the medical man's next visit.

Now, ordinarily, it is of no consequence; commonly disappearing spontaneously, and requiring no medical treatment. If, however, it does not go off in two or three days, a tea-spoonful of castor oil should be given once, or oftener, if necessary.

It is, of course, possible for an attack of real jaundice to occur at this early period, and a disease of a very serious nature will then have to be dealt with; but, except as a consequence of malformation (a very infrequent occurrence), it is not likely to arise; and therefore jaundice during the first and second week after delivery need not create alarm.

TONGUE-TIED.—This arises from the bridle under the tongue being so short, or its attachment to the tongue extended so near the tip, as to interfere with the motions of the organ in sucking, and, in after years, in speaking. It is *a rare occurrence*, although nothing is more common than for medical men to have infants brought to them supposed to be labouring under the above defect.

How its existence may be determined.— The best guide for a parent to determine whether it exist or not, is for her to watch whether the infant can protrude the tip of the tongue beyond the lips: if so, it will be able to suck a good nipple readily, and nothing need or ought to be done. No mother will unnecessarily expose her infant to an operation, which, unless very carefully performed, is not altogether unattended with danger; and, if she suspects any defect of this kind to exist, she has only to observe the circumstance mentioned above, to satisfy her mind upon the subject.

MOLES AND MARKS ON THE SKIN, &c.—The supposed influence of the imagination of the mother, in the production of the above appearances in the texture of the skin of her infant, has been fully discussed in the author's work "Hints to Mothers, on the Management of their Health during the Period of Pregnancy, and in the Lying-in Room;" and as this part of the subject

is foreign to the present inquiry, which chiefly has reference to the probable effect of their presence upon the health of the child, it is unnecessary again to refer to it here.

These appearances may be divided into two classes: the brownish mole, and claret-stain; and small but somewhat elevated tumours, either of a dark blue, livid colour, or of a bright vermilion hue.

Moles and stains.—They are of no importance, as far as the health of the infant is concerned. If situated in the face, however, they frequently cause great disfigurement, as the claret-stain, which may be seen sometimes to occupy nearly half the face. But they happily do not increase in size, remaining stationary through life; and as any operation that might be proposed for their removal, would only cause an equal, if not greater, deformity, they ought to be left alone.

Coloured spots or tumours. — These vary in their number, size, and situation. The same child is sometimes born with many of them. They may be as small as a pea, or as large as a crown piece. They are not only found on the skin, but on the lips, in the mouth, &c.

These, also, sometimes remain stationary in their size, having no tendency to enlarge, unless, indeed, they are subjected to friction or pressure. But as they frequently require surgical aid,—in

which case, the earlier the application of remedial measures, the less severe in their kind, and the greater the probability of a speedy and successful result,—so is it *always* important for the mother *early* to obtain a medical opinion, that the measure of interference or non-interference may be decided.

SECT. II. — ACCIDENTS OF A SUBSEQUENT PERIOD.

Accidents, more or less serious, are daily occurring to children. Of course they take place suddenly,—in a moment; and, in nine cases out of ten, the parents and attendants, greatly alarmed, know not what to do, or, perhaps, ignorantly do the very thing they ought not, and increase the mischief, instead of relieving it. The fact is, when an accident of a serious nature occurs, the sudden rousing of the parental feelings so increases the alarm as to incapacitate the mind for action, unless indeed it be in some degree prepared by previous instruction. This knowledge, however, is seldom possessed, unless circumstances, at some former period, have arisen to give it. A few hints then for *immediate* guidance and direction in case of need may not be unwelcome or useless. The principal information, however, which it is proposed to give, is just that which may be advantageously used before surgical aid

can be obtained; and a few words under the separate heads will amply suffice to convey all that need be said.

BURNS AND SCALDS.— The severity of the injury from a burn must always be mainly in proportion to the length of time the burning body continues in contact with the skin. It is important, therefore, that every one should impress upon his mind the course which it is best to take in case of accidents from burns.

Should the clothing of a child take fire, let it be remembered that the upright posture is obviously not only favourable to the spreading of the flames, but to their reaching the more important parts of the body, the neck and head. Any motion of the body to and fro gives great advantage to the flames, by bringing fresh currents of air into contact with the burning materials, and it is therefore utterly absurd to allow a child to run screaming about. Throw him upon the floor: keep rolling him over and over upon the carpet; if possible seize the hearth-rug, or the table-cover, or strip yourself of your shawl, and envelop the child in it as closely and completely as possible. In this way you will most readily put out the fire.

The thing to be done to the burnt or scalded parts is instantly to apply to them soft linen well soaked in tepid oil of turpentine. To make the

oil of turpentine tepid, having poured it into a tea-cup, let it stand for a little in boiling water.

In about a quarter of an hour or twenty minutes the pain will be relieved, and the child will perhaps fall asleep. If you have not the turpentine readily at hand, linen well saturated in common oil is a very good substitute.

In *slight* cases you may resort to cold applications, cold water is as good as any lotion for this purpose, or ice if you have it at hand; but whatever is used, it must be renewed often enough to keep up the sensation of cold. Cold however must never be resorted to if the accident is in any degree severe. Some persons prefer in these cases, in which there is no vesication, the application of heat, and if it can be done conveniently, there is no objection to it. For this purpose the part may be held near the fire, or immersed in water of 112°, continuing this until the burning pain begins to subside.

BRUISES. — Contusions are caused by the forcible compression of some blunt heavy body. The skin escapes by its toughness and elasticity, while the parts beneath are bruised and disorganised. Blood is effused into these parts: this renders them tumid, and imparts a livid hue, which subsequently, as the blood is absorbed, passes through several well-known shades before it finally disappears.

Bruises if uncomplicated require very simple treatment, and it is only to trifling cases that there is any occasion to refer, since, if more severe, the medical man must be sent for; and before his arrival, nothing more need be done in this case than the other.

Apply to the part cold water, in which put some nitre or common salt to render it colder. You may apply this in a bladder, or fold a piece of soft linen rag several times, proportioning it to the size of the bruise: lay it on the part, and keep it there by means of a bandage or otherwise. Renew it sufficiently often to maintain the coldness of the application. You may substitute for the above broken pieces of ice put into a bladder, if it can be easily obtained.

I would caution a parent in case the blow occur to the head of a young child, that she do not think too lightly of the circumstance. The health of such a child should be watched for some time afterwards, and the medical man consulted as to its management; for lack of such care, I have again and again seen serious results. One of the worst cases of convulsions (to get well) that I was ever called to, was clearly traceable to a blow on the back of the head received from a fall from the nurse's arms, two or three weeks previously, which had been all but forgotten, and thought of no consequence.

breathing becomes oppressed, the skin becomes more pungently hot and dry, and the thirst urgent. All these symptoms being increased towards evening, when the febrile restlessness is often succeeded by delirium.

The rash is seldom perceptible before the third day, and then comes out in irregular patches on various parts of the body, particularly about the elbows and wrists; thus differing as to the time and mode of its appearance, from the mild form of the disease. It frequently recedes, or entirely vanishes, the day after it first comes out, and then re-appears partially, and at uncertain times. This generally protracts the duration of the disorder, without, however, producing any perceptible change in the other symptoms. On the fifth or sixth day of the disease, the fever and inflammation of the throat begin to abate; at the same time the rash declines, and the peeling off of the cuticle soon follows.

This is the ordinary course of scarlet fever with sore throat; but in many cases the symptoms run still higher, and the disease is alarmingly dangerous from its commencement. In some instances, there is an acrid discharge from the nostrils or ears, often accompanied with deafness; as also enlargements of the glands in the neck, followed by the formation of abscesses in their immediate neighbourhood. It is unnecessary,

prevent union. Where they cannot be easily extracted at the time, the best application is a bread-and-water poultice, suppuration succeeds, and the particles easily discharge themselves.

In slight wounds these directions may be readily applied by a parent; in cases of severity enough has been said to guide her until medical aid arrives.

BROKEN LIMBS. — When a child meets with an accident, and it is suspected that a limb is broken, from the nature of the complaint he makes, and other signs, viz. deformity, such as the bending or shortening or twisting of the injured limb, much immediate additional suffering to the little patient, and increased mischief to the injured part, may often be saved by a little care and management. In lifting him from the place where the accident happened, let it be one person's business to take charge of the broken limb, carefully supporting, and, as much as possible, steadying it from all jar or shock, whilst he is carried to a couch or bed. Then do not attempt to undress him, but place the limb upon a soft pillow in the most easy position,—and thus let things remain until the arrival of the surgeon.

BLEEDING FROM THE NOSE. — A very frequent occurrence in children, and occasionally

very useful. If, however, it is profuse, and attended by headache, consult your medical adviser, and in the mean while, place the child in an upright posture, apply cold water to the head, or dash iced-water over the face, or apply ice itself in a cloth over the forehead and nose, and place a piece of cold metal to the back,—give a draught of cold water,—and you may even, if it be necessary, compress the nostril between your fingers.

FOREIGN BODIES IN THE EAR, ETC.—A foreign body through play or some accidental circumstance occasionally gets into the *ear* of a child. It will be best for a parent not to attempt its removal. The best and easiest mode is injecting the ear with warm water by means of a proper syringe—an operation too delicate for any but a surgeon to attempt. Never allow a nurse-maid to make attempts with a bodkin or any similar instrument: serious inflammation in the tube has been thus brought about.

If a foreign body gets into the *nose*, send for a surgeon at once: the sooner it is removed the better.

If a metallic body, as money, or any thing of this nature, be swallowed, always have the advice of your medical attendant. It may be of no consequence, it is true, but it is sometimes otherwise.

STINGS OF INSECTS. — Children are perhaps more liable to be stung by bees and wasps than adults. The first thing to be done when a child is stung is to examine the parts with a lens, and extract the stings with a fine forceps, if they have been left in the wound, as they frequently are. Then the best remedies are either turpentine, hot vinegar, spirits of wine, or eau de Cologne. Cold applications will give great relief if used continuously. A piece of soft linen soaked in soap liniment may be used subsequently, to remove the œdematous swelling that remains.

For the bites of bugs, fleas, or gnats, the best remedy is eau de Cologne, so as to convert the itching into slight smarting.

SECT. III. — DISORDERS OF THE STOMACH AND BOWELS OF THE INFANT.

Disorder of the stomach and bowels, as shown by *indigestion, flatulence, vomiting, griping, and looseness,* is one of the most fruitful sources of the diseases of infancy. Only prevent their derangement, and all things being equal, the infant will be healthy and flourish. Experience daily proves, that a large proportion of the children who die in infancy are lost from derangement of these organs as the primary cause.

There are many causes which may give rise to these affections; some of them appertain to the mother's system, others to that of the infant. All are capable, to a great extent, of being prevented or remedied. It is, therefore, most important that a parent should not be ignorant or misinformed upon this subject. It is the prevention of these affections, however, that will be principally dwelt upon in this chapter; for let the mother ever bear in mind, and act upon the principle, that the prevention of disease alone belongs to her; the cure to the physician. For the sake of clearness and reference, these disorders will be spoken of as they occur: — *in the infant at the breast — at the period of weaning — and in the infant brought up by hand.*

In the infant at the breast. — The most frequent causes giving rise to derangements of the stomach and bowels in the infant at the breast, are unwholesome breast-milk, irregular nursing, the irritation of teething, and cold or damp.

Unhealthy milk. — This may arise from the parent getting out of health, a circumstance which will be so manifest to herself, and to those more immediately interested in her welfare, that it is only necessary just to allude to it here. Suffice it to say, that there are many causes of a general kind

to which it may owe its origin; but that the most frequent is *undue lactation*, a subject to which reference has already been made (p. 16.), and the effects both upon mother and child fully dwelt upon. To cure derangement of the bowels from this cause, a wet-nurse is the only remedy.

Anxiety of mind in the mother will cause her milk to be unhealthy in its character, and deficient in quantity, giving rise to flatulence, griping, and sometimes even convulsions in the infant, an illustration of which has already been given (p. 24.). A fit of passion in the nurse will frequently be followed by a fit of bowel complaint in the child. These causes of course are temporary, and when removed the milk becomes as healthy and sufficient for the child as before. Sudden and great mental disturbance, however, will occasionally drive away the milk *altogether*, and in a few hours. For example:—a Mrs. S., æt. 21, a fine healthy woman, of a blonde complexion, was confined of a boy in October, 1836. She had a good time, and a plentiful supply of milk for the child, which she continued to suckle till the following January, a period of three months, when her milk suddenly disappeared. This circumstance puzzled the medical attendant, for he could not trace it to any physical ailment; but the milk never returned, and a wet-nurse became necessary. In the following spring the husband of this lady failed, an ad-

versity which had been impending since the date when the breast-milk disappeared, upon which day the deranged state of the husband's affairs was made known to the wife,—a fact which at once explained the mysterious disappearance of the milk.

Unwholesome articles of diet will affect the mother's milk, and derange the infant's bowels. On the 25th May, 1836, I was called to see an infant at the breast with diarrhœa. The remedial measures had but little effect so long as the infant was allowed the breast-milk; but this being discontinued, and arrow-root made with water only allowed, the complaint was quickly put a stop to. Believing that the mother's milk was impaired from some accidental cause which might now be passed, the infant was again allowed the breast. In less than four-and-twenty hours, however, the diarrhœa returned. The mother being a very healthy woman, it was suspected that some unwholesome article in her diet might be the cause. The regimen was accordingly carefully inquired into, when it appeared that porter from a neighbouring publican's had been substituted for their own for some little time past. This proved to be bad, throwing down, when left to stand a few hours, a considerable sediment; it was discontinued; good sound ale taken instead; the infant again put to the breast, upon the milk of which it flourished, and never had another attack.

In the same way *aperient medicine*, taken by the mother, will act on the child's bowels, through the effect which it produces upon her milk. This, however, is not the case with all kinds of purgative medicine, nor does the same purgative produce a like effect upon all children. It is well, therefore, for a parent to notice what aperient acts thus through her system upon that of her child, and what does not, and when an aperient becomes necessary for herself, unless she desire that the infant's bowels be moved, to avoid the latter; if otherwise, she may take the former with good effect.

Again; the return of *the monthly periods* whilst the mother is a nurse always affects the properties of the milk, more or less, deranging the stomach and bowels of the infant. It will thus frequently happen, that a few days before the mother is going to be unwell, the infant will become fretful and uneasy; its stomach will throw up the milk, and its motions will be frequent, watery, and greenish. And then, when the period is fully over, the milk will cease to purge. It is principally in the early months, however, that the infant seems to be affected by this circumstance; for it will be generally found that although the milk is certainly impaired by it, being less abundant and nutritious, still, after the third or fourth month it ceases to affect the infant. Is then a mother, because her monthly periods return after

her delivery to give up nursing? Certainly not, unless the infant's health is seriously affected by it; for she will generally find that, as the periods come round, by keeping the infant pretty much from the breast, during its continuance, and feeding him upon artificial food, she will prevent disorder of the child's health, and be able in the intervals to nurse her infant with advantage. It must be added, however, that a wet-nurse is to be resorted to rather than any risk incurred of injuring the child's health; and that, in every case partial feeding will be necessary at a much earlier period than when a mother is not thus affected.

The milk may also be rendered less nutritive, and diminished in quantity, by the mother again becoming *pregnant*. In this case, however, the parent's health will chiefly suffer, if she persevere in nursing; this, however, will again act prejudicially to the child. It will be wise, therefore, if pregnancy should occur, and the milk disagree with the infant, to resign the duties of a nurse, and to put the child upon a suitable artificial diet; — if, however, pregnancy should take place before the infant is six months old, a wet-nurse ought to be procured.

Irregular nursing. — This is one of the most frequent sources of derangement of the stomach

and bowels of the child. The infant that is constantly at the breast will always be suffering, more or less, from flatulence, griping, looseness of the bowels, and vomiting. This is caused by a sufficient interval not being allowed between the meals for digestion. The milk, therefore, passes on from the stomach into the bowels undigested, and the effects just alluded to follow. Time must not only be given for the proper digestion of the milk, but the stomach itself must be allowed a season of repose. This evil, then, must be avoided most carefully by the mother strictly adhering to those rules for nursing which have been laid down at page 3.

Teething. — The bowels of the infant at the breast, as well as after it is weaned, are generally affected by teething. And it is fortunate that this is the case, for it prevents more serious affections. Indeed, the diarrhœa that occurs during dentition, except it be violent, must not be subdued; if, however, this is the case, attention must be paid to it. It will generally be found to be accompanied by a swollen gum; the freely lancing of which will sometimes alone put a stop to the looseness: further medical aid may, however, be necessary.

Cold and damp. — Of course there are other

causes besides those already alluded to, giving rise to bowel complaints, during this period, — causes not cognisable by the mother, however, and not mentioned therefore here. It is right, however, that she should be aware that these affections are sometimes the result simply of impressions of cold or damp, particularly at certain seasons of the year; in the autumn, for instance, when, as is well known, bowel complaints are very frequent. When thus produced, it is important early to seek medical aid, as inflammation is generally the result.

AT THE PERIOD OF WEANING. — There is great susceptibility to derangements of the stomach and bowels of the child at the period when weaning ordinarily takes place, so that great care and judgment must be exercised in effecting this object. Usually, however, the bowels are deranged during this process from one of these causes — from weaning too early, from effecting it too suddenly and abruptly, or from overfeeding and the use of improper and unsuitable food. There is another cause which also may give rise to diarrhœa at this time, independently of weaning, viz. the irritation of difficult teething.

From weaning too early. — The substitution of artificial food for the breast-milk of the mother,

at a period when the digestive organs of the infant are too delicate for this change, is a frequent source of the affections now under consideration. The attempt to wean a delicate child, for instance, when only six months old, will inevitably be followed by disorder of the stomach and bowels. Unless, therefore, a mother is obliged to resort to this measure, from becoming pregnant, or any other unavoidable cause, if she consult the welfare of her child, she will not give up nursing at this early period. But if she should be no longer competent to suckle, and her infant be delicate, a wet-nurse must be obtained; for the infant's bowels becoming disordered, medicine or remedies will avail little without healthy breast-milk.

The age at which weaning ought to take place must ever depend upon circumstances; the ninth month would not be too early for some, the twelfth would be for others. This, however, is spoken off elsewhere (p. 35.).

From sudden and abrupt alteration of diet. — Depriving the child at once of the breast, and substituting artificial food, however proper under due regulations such food may be, will invariably cause bowel complaints. Certain rules and regulations must be adopted to effect weaning safely, the details of which are given in the article on weaning.

From overfeeding, and the use of improper and unwholesome food. — These causes are more productive of disorder of the stomach and bowels at the time of weaning than any yet referred to.

If too large a quantity of food is given at each meal, or the meals are too frequently repeated, in both instances the stomach will become oppressed, wearied, and deranged; part of the food, perhaps, thrown up by vomiting, whilst the remainder, not having undergone the digestive process, will pass on into the bowels, irritate its delicate lining membrane, and produce flatulence, with griping, purging, and perhaps convulsions.

Then, again, improper and unsuitable food will be followed by precisely the same effects; and unless a judicious alteration be quickly made, remedies will not only have no influence over the disease, but the cause being continued, the disease will become most seriously aggravated.

It is, therefore, of the first importance to the well-doing of the child, that at this period, when the mother is about to substitute an artificial food for that of her own breast, she should first ascertain what kind of food suits the child best, and then the precise quantity which nature demands. Many cases might be cited, where children have never had a prescription written for them, simply because, these points having been attended to,

their diet has been managed with judgment and care; whilst, on the other hand, others might be referred to, whose life has been hazarded, and all but lost, simply from injudicious dietetic management. Over-feeding, and improper articles of food, are more frequently productive, in their result, of anxious hours and distressing scenes to the parent, and of danger and loss of life to the child, than almost any other causes.

Teething.—The irritation occasioned by difficult teething may give rise to diarrhœa at the period when the infant is weaned, independently of the weaning itself. Such disorder of the bowels, if it manifestly occur from this cause, is a favourable circumstance, and should not be interfered with, unless indeed the attack be severe and aggravated, when medical aid becomes necessary. Slight diarrhœa then, during weaning, when it is fairly traceable to the cutting of a tooth (the heated and inflamed state of the gum will at once point to this as the source of the derangement), is of no consequence, but it must not be mistaken for disorder arising from other causes. Lancing the gum will at once remove the cause, and generally cure the bowel complaint.

In the child brought up by hand. — Children brought up on an artificial diet are very

liable to indigestion and bowel complaints; indeed none more so: and it is from these affections that so many of these infants perish. When, therefore, it is absolutely necessary from untoward circumstances to have recourse to this mode of nourishing the child, the rules and regulations laid down in the section on "Artificial Feeding" (p. 40.) must be most strictly followed out, if the parent would hope to avoid disease and rear her child. And if these affections should at any time unfortunately manifest themselves, the mother ought carefully and diligently to examine whether the plan of feeding pursued is in every particular correct, particularly bearing in mind that the two causes most frequently productive of disorder in the child are *over-feeding* and the *exhibition of unsuitable food*—the two grand errors of the nursery. These results, however, have already been sufficiently dwelt upon as likely to take place at weaning, and they may of course occur to a child who is brought up on an artificial diet at any period.

MATERNAL TREATMENT OF THESE DISORDERS. — As must have been already seen, the maternal treatment of disorders of the stomach and bowels chiefly consists in the removal of the *cause* of the disorder: medicine may occasionally be exhibited by the mother, but its use in her hands must be very limited indeed.

Unfortunately the general resource and only remedy of most mothers in affections of the stomach and bowels is an aperient, and a combination containing calomel is the one too frequently selected. The primary cause of the disorder is undetected, and consequently no measures taken for its removal, but purgative powder after purgative powder is given, the evil being supposed to rest in the bowels alone, and that such means must eventually get rid of it. The mother is not aware all this time that the real source of the derangement is probably in the diet itself; that there is some error here, and that unless this is corrected, the remedies must be worse than useless. The consequence of such a plan of proceeding is usually very sad: a confirmed and obstinate diarrhœa but too commonly ensues, and the infant is sometimes reduced to the last extremity.

The removal of the cause of the disorder, then, in a large number of instances of derangement of the stomach and bowels, if effected early, will cure the disease, and without further remedy. But it will be asked, by what method is this cause to be detected? In this way. In all human probability the primary cause of the disorder is connected with the diet; this is the case in ninety-nine instances out of a hundred. Well, then, is the sick child at the breast? If so, ascertain whether the breast-milk is healthy and wholesome, or whether

any circumstances exist which may have rendered it otherwise? If nothing faulty is found here, the next question would naturally be, whether the rules and regulations laid down for suckling have been strictly adhered to? Or, whether the infant is sufficiently old to render it at all probable that a tooth may be irritating the gum?

Perhaps the child is being weaned; well, is there any error here? Is the change being attempted too early? or too suddenly and abruptly? If this is not the case, then, has the child been over-fed, or is the food given of the proper description?

Is the child being brought up by hand? Then, there is every reason to suspect, either that the food is not properly prepared, or that the quality of the food given is not the most suitable, or, that the quantity exhibited is too great; in fact, that the rules laid down for "artificial feeding" have not been strictly acted upon.

By a mode of investigation like this, any defect or error in the dietetic management of the infant producing the disorder will be easily detected by a careful mother; and its correction alone will, in very many instances, be all that is necessary to remove the symptoms.

For example, if *flatulence and griping*, followed by diarrhœa, occur *to an infant at the breast;* if at the same time it becomes pale, its flesh flabby, its disposition fretful, always crying until it is

put to the breast, the nipple of which it grasps eagerly, sucking eagerly, yet never satisfied, for its hunger continues, it is not nourished; if, too, the more it sucks, the more the stomach and bowels are deranged, the more it vomits and is purged; depend upon it the cause of all the evil will be found to be unwholesome milk. No medicine will avail any thing here; the cause must be removed; the best medicine, and the only remedy, is a breast of healthy milk. And if this is not procured early, there will be great danger of a diarrhœa setting in, which may probably prove fatal to the child.

Again; if there is simply *vomiting* of the breast-milk almost immediately after the child has been suckled, the milk coming up pure and unchanged, and discharged without any apparent effort, and the moment after the child is cheerful and happy, this will be found to depend upon repletion, and not upon unwholsome milk; in fact, the stomach has received too much. This must be prevented in future, not by giving medicine, but simply by removing the infant from the nipple immediately it ceases to draw strongly, the moment it begins to dally with the breast.

Again; *if flatulence and griping* occur *to the child brought up by hand,* this derangement will generally be found to result from over-feeding: abstinence and diminution of the quantity of the

food will generally be all that is necessary here. It will be well, however, for the mother in this case, and she may do it with the utmost safety, to unload the bowels of their indigestible contents by the exhibition of a tea-spoonful of castor oil. A dose or two of this medicine will effectually clear them out, without increasing the irritation, or weakening the child, whilst it will in most instances altogether remove the symptoms. If the flatulence, however, should continue, four or five grains of magnesia may be mixed with the last meal at night, and a little warm water thrown up into the bowel as an injection the next morning.

Diarrhœa occurring in a child brought up by hand, if it be not the result of over-feeding, will very frequently be found to arise from unsuitable diet, the food given not being of a kind suited to the infant's stomach; for what will agree with one child often disagrees with another. Alteration of diet will sometimes alone suffice in these cases to cure, if this alteration is only made early enough, before any considerable irritation of the stomach and bowels has been induced. Thin arrow-root made with water (prepared very carefully, or the child will refuse it,) should be given for five or six days; the warm bath used every night for the same period, a new flannel bandage rolled round the body, and the child cautiously

protected from a damp atmosphere. The arrow-root, upon the cessation of the diarrhœa, may have cow's milk added to it, if milk is not found to disagree: when this is the case, chicken or weak mutton broth, free from fat, or beef-tea, thickened with farinaceous food, with a litle salt added, are the best substitutes. Should not the diarrhœa yield to the foregoing measures, and that readily, medical aid ought to be sought. Diarrhœa very frequently occurs from the time of weaning to the third year of age, and certainly in its effects forms so important a disease, that, unless in the slight form noticed above, a mother is not justified in attempting its relief.

In conclusion, I would observe, that I do not think a mother justified in attempting more than what has been laid down here for her guidance. It is believed that the few and plain common-sense directions given, if followed, will do much to prevent disease, and even to relieve it in its milder forms, they will not, however, cure disease itself when really established; and again I would repeat, let the mother recollect that to prevent disease is her province—to cure it, is the physician's.

SECT. IV. — COSTIVENESS.

IN INFANCY. — The principle to act upon in the management of the infant's bowels is this, — that they should be kept free, and by the mildest and least irritating means.

If therefore they become *accidentally* confined (less than two stools in the four-and-twenty hours), and the infant is suckled, the mother may ascertain whether an aperient taken by herself will render her milk of a sufficiently purgative quality to act upon the bowels of her child. This is the mildest mode of all.

If, however, this does not answer, or is not practicable from the child being fed artificially, then the mildest aperient medicines must be chosen to accomplish this purpose. The kind of medicine to be selected, and the doses in which to be administered, will be found in the section on "Aperient Medicine," page 118.

If, however, the bowels of the infant are disposed to be *habitually* confined, it should be ascertained whether this may not be dependent upon its diet. The same food that agrees perfectly well with one child will frequently cause costiveness in another. An intelligent and observing mother will soon discover whether this is the source of the mischief, or not. Boiled

milk, for instance, will invariably cause confined bowels in some children; the same result will follow sago boiled in beef-tea, with others; whilst, on the other hand, the bowels may frequently be brought into regular order, and their confined state overcome, by changing the food to Leman's tops and bottoms steeped in boiling water, and a small quantity of unboiled milk added; or Densham's farinaceous food, prepared in the manner directed before (p. 58.), will have the same effect.

Sometimes children are *constitutionally* costive, that is, the bowels are relieved every third or fourth day, not oftener, and yet perfect health is enjoyed. This occasionally will happen in large families, all the children, though perfectly healthy and robust, being similarly affected. When such is found by a mother to be really the habit of her child, it would be very unwise, because injurious to its health, to attempt by purgatives to obtain more frequent relief. At the same time it will be prudent and necessary for her to watch that the regular time is not exceeded. This condition seldom occurs to the very young infant.

In CHILDHOOD. — Children of sound health, who are judiciously fed, and have sufficient exercise, very seldom need aperient medicine. Errors in diet, a want of proper attention to the

state of the skin, insufficiency of air and exercise, in fine, a neglect of those general principles which have been laid down for the management of health, and upon the observance of which the due and healthy performance of every function of the body depends, are the sources of bowel derangements, and particularly, at this age, of costiveness.

I feel assured, however, that some children are more troubled with costiveness than others, from the simple but important circumstance of their not being early taught the habit of relieving the bowels daily, and at a certain hour. There is a natural tendency to this periodical relief of the system, and it exists at the earliest age. And if the mother only cause this habit to be fairly established in infancy, she will do much towards promoting regularity of her child's bowels throughout life. The recollection of this fact, and the mother's acting upon it, is of the greatest importance to the future health and comfort of her children.

If the bowels are *accidentally* confined at this age, castor oil is certainly the best aperient that can be given: it acts mildly but efficiently, clearing out the bowels without irritating them. The dose must be regulated by the age, as also by the effect that aperients generally have upon the individual. Great care must in future be

taken to avoid the cause or accidental circumstance which produced the irregularity.

When the bowels are *habitually* costive, much care and judgment is necessary for their relief and future management. Fortunately this condition is very rare in youth. The activity and exposure to the air, usual at this period of life, render purgatives unnecessary, unless, indeed (as just mentioned), some error in diet, or some unusual circumstance, render them accidentally confined. Should, however, the foregoing state exist, medicine alone will avail little; there are certain general measures which must also be acted up to, and most strictly, if the end is to be accomplished. They consist, principally, in an observance of great regularity with respect to the time of taking food, its quality, quantity, and due mastication; regular and sufficient exercise, horse exercise being particularly serviceable; the shower-bath, or daily ablution; early rising (the indulgence in the habit of lying in bed always predisposing to constipation); and, lastly, the patient habituating himself to evacuate the bowels at a certain hour of the day. After breakfast appears to be the time when the bowels are more disposed to act than at any other part of the day; this is the time, then, that should be chosen.

All these points must be sedulously observed,

and upon the principles laid down in the various chapters upon these subjects, if habitual costiveness is expected to be overcome.

SECT. V. — WORMS.

Not so frequent as popularly supposed; an error productive of mischief. — Almost all diseases have been, at one time or other, attributed to the generation of worms in the intestines. And at the present day it is not at all an uncommon occurrence for medical men to be called in to prescribe for children, to whom the strongest purgative quack medicines have been previously exhibited by parents, for the removal of symptoms which, upon investigation, are found in no way connected with or produced by worms. The results of such errors are always, more or less, mischievous, and sometimes of so serious a nature as to lay the foundation of disease which ultimately proves fatal. This observation, moreover, it behoves a mother carefully to regard, since the symptoms, popularly supposed to indicate the existence of worms, are so deceptive, (and none more so than that which is usually so much depended upon — the picking of the nose,) that it may be positively asserted to be impossible for an unprofessional person to form a correct and sound opinion in any of these cases.

It was at one time imagined, and the idea is still popularly current, that worms were the occasion of a troublesome and lingering species of fever, which was therefore designated worm-fever. This notion is now entirely exploded: for if worms be present under such circumstances, it is a mere accidental complication; the fever referred to being generally of a remitting character, and neither caused by or causing the generation of worms. The symptoms of this fever, however, have led and continue to lead very many astray. This is not surprising, since they so closely resemble those which characterise the presence of worms, that an unprofessional person is almost sure to be misled by them. Amongst other symptoms, there is the picking of the nose and lips, offensive breath, occasional vomiting, deranged bowels, pain in the head and belly, with a tumid and swollen condition of the latter, a short dry cough, wasting of the flesh, &c.; symptoms continually attendant upon the disorder now under consideration. These cases have hitherto been perpetually looked upon by mothers as worm-cases, and after having been treated by them as such, by the use of the popular worm-powders of the day, have, as perpetually, presented themselves to the physician greatly and grievously aggravated by such injudicious treatment. It is folly, at any time, for an unprofessional person to prescribe for a case where

worms are actually known to exist: surely where there is any doubt upon the latter point it must be greater folly still.

The infant at the breast is seldom, if ever, the subject of this disorder, whilst an artificial diet, or bringing up by hand, predisposes to it. Worms most frequently occur, however, during childhood; much more so at this epoch than in adult age. They do not invariably occasion indisposition, for they are now and then passed without pain or distress by children who are in the enjoyment of perfect health, and in whom previously there was not the slightest suspicion of their existence. The idea, formerly so prevalent, of their being attended with danger, is without foundation; for unless the case be mismanaged, they rarely give rise to serious consequences.

How produced, and how best prevented. — The causes of worms it is not very easy to explain; at the same time it is very certain that some known circumstances favour their production.

If the general health of a child be enfeebled, particularly if the child be strumous, such a condition will favour the generation of these animals. The protracted use of unwholesome and innutritious articles of food, or a deficient supply of salt (the most necessary stimulant to the digestive organs), or other condiments, predisposes to worms.

This observation is strikingly illustrated by an occurrence which formerly took place in Holland, where an ancient law existed forbidding salt in the bread of certain criminals: they were in consequence horribly infested with worms, and quickly died. Sugar, too, whilst a necessary condiment for the food of children, if given in the form of sweetmeats, and their indulgence long persisted in, may so enfeeble the organs of digestion as to cause worms. And, lastly (though many other causes might be referred to), the injudicious means occasionally employed to effect the removal of these animals, by the debility produced in the intestinal canal, favours not only their re-appearance but their increase.

These, then, are so many causes which may occasion worms in the child, and of course the best and most effectual method to prevent their production is their avoidance. A mother, therefore, should at all times be careful in the regulation of the diet and general management of her child's habits and health, even if no stronger obligations existed than the dread of this disorder; and she must be more than ordinarily vigilant on this head, when the slightest disposition to such disorder is manifested. Again; she must not forget that the symptoms so commonly ascribed as characteristic of worms are much more frequently caused by other diseases; that at no time,

therefore, is she justified in giving worm powders, or strong doses of medicine for such symptoms; for if they do exist, their use is always attended with risk, and if they do not, the debility which they occasion in the stomach and bowels may itself become the source of their production.

SECT. VI. — SCARLET FEVER.

There are several varieties of this disease; it will be more perspicuous, however, for our purpose to speak of it under two forms, — *mild scarlet fever*, and *scarlet fever with sore throat*. But I fancy I hear a parent say, then what is scarlatina? Simply the Latin and scientific name for scarlet fever; and when you have supposed your child has not had the scarlet fever, but *only* scarlatina, you have been labouring under a mistake, for they are one and the same thing. This is a very absurd error, and every one ought to know that it is such; for the mystification which prevails among the public upon this point produces nothing but confusion and sometimes a disregard of necessary precautions.

MILD SCARLET FEVER. — In this form of the disease there is the rash with fever, with little or no affection of the throat.

Symptoms. — The anticipating symptoms are those of fever: they precede the eruption. The degree of fever, however, is variable; for the symptoms are sometimes so moderate as scarcely to attract attention — slight and irregular shivering, nausea, perhaps vomiting, thirst, and heat of skin; whilst, at others, there is considerable constitutional disturbance, indicated by pungent heat of skin, flushing of the face, suffusion of the eyes, pain in the head, great anxiety and restlessness, and occasionally slight delirium.

These symptoms are followed on the second day (in the majority of instances) by the rash. This first appears in numerous specks or minute patches of a vivid red colour on the face, neck, and chest. In about four-and-twenty hours it becomes gradually diffused over the whole trunk. On the following day (the third) it extends to the upper and lower extremities, so that at this period the whole surface of the body is of a bright red colour, hot and dry. The efflorescence, too, is not always confined to the skin, but occasionally tinges the inside of the lips, cheeks, palate, throat, nostrils, and even the internal surface of the eyelids. Sometimes the efflorescence is continuous and universal; but more generally on the trunk of the body there are intervals of a natural hue between the patches, with papulous dots scattered over them, the colour being most deep on the

loins and neighbouring parts, at the flexure of the joints, and upon those parts of the body which are subjected to pressure. It is also generally most vivid in the evening, gradually becoming paler towards morning.

The eruption is at its height on the fourth day;—it begins to decline on the fifth, when the interstices widen, and the florid hue fades;—on the sixth, the rash is very indistinct; and on the eighth day it is wholly gone.

The various symptoms with which the eruption is accompanied gradually disappear with the efflorescence; but the tongue still remains morbidly red and clean. The peeling off of the cuticle (the outer layer of the skin), which begins about the end of the fifth day on the parts on which the eruption first appeared, proceeds; so that about the eighth or ninth, portions of the cuticle are thrown off, the thickest and largest being those detached from the skin of the hands and feet.

SCARLET FEVER, WITH SORE THROAT.—In this form of the disease, the fever and rash are accompanied with inflammation of the throat.

Symptoms.—The symptoms are more severe than in the mild form of this disease, and, in the majority of instances, the inflammation of the throat

appears with the eruption, and goes through its progress of increase and decline with the cutaneous eruption. Sometimes, however, it precedes the fever; whilst at others it does not appear until the rash is at its height.

It is generally in the course of the second day that the child complains of considerable stiffness in the muscles of the neck, extending to the lower jaw, and under the ears;—of a roughness of the throat, and difficulty in swallowing;—and some degree of hoarseness will be noticed: all so many indications that the throat is affected. Very shortly, an increased secretion of the mucus of these parts occurs, and, collecting about the tonsils, aggravates the child's sufferings, from the frequent and ineffectual efforts made to expel it. If the inflammatory action be more severe, exudations of lymph will also be poured out, and intermingling with the mucus, greatly augment the difficulty of swallowing. At this time the lining membrane of the mouth, as also the tongue, assume a florid red colour; the red points of the latter becoming much elongated.

The febrile symptoms are severe from the first; amongst others, there will be headach, sometimes accompanied by slight delirium, nausea, intense heat of skin, languor, and considerable inquietude and anxiety; and as the inflammation approaches its height, the fever increases, the pulse rises, the

breathing becomes oppressed, the skin becomes more pungently hot and dry, and the thirst urgent. All these symptoms being increased towards evening, when the febrile restlessness is often succeeded by delirium.

The rash is seldom perceptible before the third day, and then comes out in irregular patches on various parts of the body, particularly about the elbows and wrists; thus differing as to the time and mode of its appearance, from the mild form of the disease. It frequently recedes, or entirely vanishes, the day after it first comes out, and then re-appears partially, and at uncertain times. This generally protracts the duration of the disorder, without, however, producing any perceptible change in the other symptoms. On the fifth or sixth day of the disease, the fever and inflammation of the throat begin to abate; at the same time the rash declines, and the peeling off of the cuticle soon follows.

This is the ordinary course of scarlet fever with sore throat; but in many cases the symptoms run still higher, and the disease is alarmingly dangerous from its commencement. In some instances, there is an acrid discharge from the nostrils or ears, often accompanied with deafness; as also enlargements of the glands in the neck, followed by the formation of abscesses in their immediate neighbourhood. It is unnecessary,

however, to follow out the symptoms of scarlet fever more fully; as all that has been attempted here, has been so to sketch out the more prominent symptoms of this disease, that the directions upon the parental management may be readily comprehended: they will be very brief, but a strict attention thereto will be found all-important to the well-doing and comfort of the child.

Character of scarlet fever compared with that of measles. — It will be seldom difficult to distinguish this disease from other acute eruptive disorders. The one to which it bears the greatest resemblance is the measles; but from this it is readily distinguished by the absence of the cough, the inflamed and watery eye, running at the nose and sneezing, which are the predominant symptoms in the early stage of the measles; but which do not usually attend on scarlet fever — at least, in any high degree. In measles, also, there is an absence of that restlessness, anxiety, and depression of spirits, by which scarlet fever is peculiarly distinguished. — The rash, too, in measles, does not appear till two or three days later than that of scarlet fever. It also differs in its characters. *In scarlet fever,* the eruption consists of innumerable minute dots or points, diffused in patches with uneven edges of various sizes and forms; and gives to those portions of the skin on which it

appears, a diffused bright red colour. *In measles*, the rash comes out in irregular semi-lunar or crescentic shaped patches, distinctly elevated; the spots being of a deeper red in the centre than in the circumference, and leaving intervening spaces in which the skin retains its natural pale colour.

MATERNAL MANAGEMENT. — The chief points to which the parent's attention must be directed, irrespective of a strict attention to the more immediate medical treatment directed by the physician, are the following: —

Ventilation of the bed-room. — Even in the mildest cases, the child must be kept in bed from the first accession of the fever. He must not be loaded, however, as was formerly the practice, with a quantity of bed-clothes, in order to encourage the fever and increase the quantity of eruption. A moderate quantity of clothing is all that is required, adapted to the heat of skin and feelings of the patient.

The bed-room must be kept cool and well ventilated. This is of importance in the mildest cases; but in the more severe forms of this disease, in which the throat is much affected, the constant and free admission of pure air will have a most decided and marked good effect upon the symptoms. The air should be renewed, therefore,

from time to time. The linen, both of the bed and the patient, should also be frequently changed —daily, if practicable.

However mild the symptoms of this disease may be at the commencement, the child must always be carefully and vigilantly watched by the parent, as inflammation of some internal organ may suddenly arise (which is generally indicated by symptoms sufficiently obvious), and thus change an apparently mild form of this disease into one of an alarming character.

Cold sponging.—Whenever the skin is pungently hot and dry, the whole surface of the body should be sponged with cold water, or with vinegar and water. The heat is by this means rapidly abstracted, and the child refreshed; and this may again and again be resorted to, as the heat again returns. Dr. Bateman observes, that by this application alone, "the pulse has been diminished in frequency, the thirst has abated, the tongue has become moist, a general free perspiration has broken forth, the skin has become soft and cool, and the eyes have brightened; and these indications of relief have been speedily followed by a calm and refreshing sleep. In all these respects, the condition of the patient presented a complete contrast to that which preceded the cold washing; and his languor was exchanged for a considerable

share of vigour. The morbid heat, it is true, when thus removed, is liable to return, and with it the distressing symptoms; but a repetition of the remedy is followed by the same beneficial effects as at first."

Gargles and the inhalation of warm water. — When the throat is affected, gargles are sometimes ordered; but the pain and inconvenience which their employment gives rise to, frequently precludes their use; and children seldom understand how to employ them, even if the state of the throat permitted it. Under these circumstances, the inhalation of the steam of hot water, or hot vinegar and water, may be substituted, and with decided benefit. Mudge's inhaler is a good contrivance to effect this.

When the throat is found by the mother to be early affected, an immediate application to the medical adviser is especially important. For, if he be called upon to treat this form of scarlet fever at its very commencement, by judicious treatment, the duration and violence of the disease may be both shortened and greatly mitigated.

Regimen. — Cooling drinks, as plain water, toast and water, barley water flavoured with lemon peel, fresh whey, lemonade, and thin gruel,

may all be resorted to in their turn. The child may also be allowed oranges, grapes, or lemons sweetened with sugar, particularly when the mouth is foul and dry; but care must be taken that neither the pulp nor the stones are swallowed. These will both refresh and feed the patient as much as is necessary until the decline of the disease. The parent must strictly forbid the attendants in the sick chamber giving, at this period, any heating or stimulating fluid, as also animal food; and this injunction must be strictly regarded, even in the mildest form of the disease.

Convalescence. — When the child is convalescent, mild nourishment will be required, such as arrow-root, tapioca, chicken or mutton broth, beef tea, jellies, and roasted apples; and by and by a mutton chop. Wine is seldom necessary, except under circumstances of unusual debility after a protracted illness, when its moderate use tends much to assist the convalescence; but, if given unadvisedly, there will be great hazard of exciting internal inflammatory disease.

Relapses are sometimes caused by the child getting about too soon, and by indulgence of the appetite, particularly for food: a proper degree of restraint, therefore, must be placed upon the child by the parent, who cannot too strictly carry out the directions of the medical attendant

upon the diet and regimen during this period. Great attention must still be paid to the state of the bowels, and, indeed, to all the secretions and excretions.

Even when scarlet fever has been of the mildest form, a parent cannot observe too much care and caution during the period of convalescence. One of the most common and serious of the after-disorders of this fever is dropsy; a disease much more frequent, as far as my experience goes, after a mild than after a severe attack of scarlet fever. This, in all probability, is owing to neglect at this period; for I have generally been able to trace the source of the dropsy, in the cases which I have seen, to some accidental or heedless exposure of the child to a cold or damp atmosphere.

Peeling off of the cuticle, and falling off of the hair. — To promote the more easy separation of the cuticle from the surface of the body, a warm or tepid bath may be usefully employed at the close of the disease. It will, moreover, greatly contribute to the comfort of the child, and induce a more healthy condition of the skin. Occasionally the cuticle of the whole hand and fingers will peel off unbroken, when it will resemble precisely a glove in shape.

As is the case in all fevers, more or less, so

particularly after scarlet fever, there is a great tendency to the falling off of the hair. It will be always well, therefore, to shave the head at this time, and exhibit daily a tepid shower bath, as early as the strength of the child will permit.

Cautions, &c. — The contagious character of this disease requires the separation of the invalid from the rest of the family; and, when it is practicable, the children should be removed to a distance. This measure is imperatively called for, when the form of the disease is very severe in its character.

Great caution must also be exercised, after the convalescence of the patient, that the other children are not brought into too early contact with him: for infection may be thus produced, though several weeks may have elapsed from the period of the peeling off of the skin.

The period at which the disease shows itself after the exposure of an individual to sources of contagion, is exceedingly various. One child will be seized within a few hours; another, not for some days; and now and then (though rarely,) five or six weeks have intervened between the period of exposure and the manifestation of the disease.

When this disease is rife in a family, it will

frequently affect the individuals composing it very differently. Some escape altogether; — others have the mild form of the complaint; — others the severe; — and, again, the attendant in the sick room may be attacked with the sore throat and fever only, both of which may subside without any appearance of a rash.

In conclusion, this disease is a complaint of infancy and childhood, rather than of adult age; generally affects the same individual but once during his life; and, though examples of a second attack have occurred, such a circumstance is extremely rare.

SECT. VII. — MEASLES.

Measles consists of a fever, in which the mucous lining of the air-passages is principally affected, and which, after about three days' duration, results in an eruption of a red rash over the surface.

It depends upon a specific contagion; — occurs most frequently during childhood and adolescence, though no age is exempt from it; — and affects the system but once; a peculiarity to which an exception is very rare, proved by the few instances of the kind which have been recorded.

The period at which the disease manifests itself

after infection is various — generally about the ninth day; it has, however, been delayed until the sixteenth.

Description of the disease. — The child infected will be observed not to be as well as usual, less active, and out of spirits: his appetite will fail, and his sleep be restless and disturbed. It will soon be evident that he has apparently taken a cold in his head, and that this is accompanied by fever. His voice will be hoarse; there will be frequent cough, headach, sneezing, running from the nose and eyes — the eyelids being somewhat swollen, and the eyes inflamed; — the skin will be hot and dry, and he will complain of occasional chilliness. In the course of the next two or three days, these symptoms will increase in severity, and perhaps be accompanied by oppression at the chest and hurried breathing, and towards evening by slight delirium.

On the fourth day, the rash will appear, but the symptoms will be little, if at all, mitigated; indeed, they will sometimes increase in severity. The eruption will first be perceived about the head and face, in the form of small red spots, at first distinct from each other, but soon coalescing, and forming patches of an irregular crescent-like or semilunar figure, of a dull red colour, and slightly elevated (giving a sensation of hardness to

the finger), while portions of the skin intervening between them will retain their natural appearance. At this time the eruption will also be found on the inside of the mouth and throat, and the hoarseness will consequently increase.

On the fifth day the rash usually covers the whole surface of the body, with the exception of the legs and feet; and is now very vivid on the face, which is not unfrequently so much swelled, especially the eyelids, that the eyes are quite closed up, as in small-pox. On the sixth day, it is fully out on the extremities, and is beginning to fade on the face. On the eighth, it is fading from all parts; on the ninth, it is hardly perceptible; and has entirely disappeared on the tenth day from the commencement of the fever, or the sixth from its own first appearance. As the fading proceeds, the spots drop off in the form of little branny scales, which are sometimes, from their minuteness, scarcely perceptible. They leave a slight discolouration on the skin, with considerable itching.

Such is the ordinary course of this disease; occasionally, however, deviations are met with.

Character of measles compared with scarlet fever and small-pox. — Under the description given of Scarlet Fever, are noticed several signs by which that disease may be distinguished from measles: to

these may be added the absence of cough, of water flowing from the eyes, and of redness and swelling of the eyelids as in measles. Again, in measles, the eruption is more pointed, of a crimson instead of a scarlet hue, and does not appear until two days later than in scarlet fever.

In small-pox, the fever abates as soon as the eruption makes its appearance. In scarlet fever, this is by no means the case; and as little so in measles: the vomiting, indeed, subsides; but the cough, fever, and headach grow more violent; and the difficulty of breathing, weakness of the eyes, and, indeed, all the catarrhal symptoms, remain without any abatement till the eruption has all but completed its course.

MATERNAL MANAGEMENT. — Measles, in its ordinary and simple form, is a mild, and by no means dangerous, disease: it is sometimes, however, accompanied or immediately followed by symptoms of a very serious character, and which, it is to be feared, in many instances, owe their origin to the carelessness of the attendants in the sick chamber. A mother's superintendence, therefore, is much required at this time to insure a careful attention to the medical directions, as also to those general points of management upon which the well-doing of her child much depend, of which the following are the most important: —

Ventilation of the bed-room, &c. — The child must be kept in bed from the onset of the attack. He must have so much clothing only as will secure his comfort, avoiding equally too much heat or exposure to cold. To these points the parent's attention must be particularly directed. It is the practice with some nurses, in the belief that a breath of cool air is most pernicious, to keep the child constantly enveloped in a smothering heap of bed-clothes, with curtains closely drawn, and the room well heated by fire, by which means the fever and all its concomitant dangers are greatly augmented. It is equally a popular error (and yet by many it is still held and acted upon) to suppose that because in small-pox exposure to cold is useful, that therefore it must be of equal advantage in measles. It cannot be too generally known that the nature of the fevers accompanying the two diseases are widely different, and that the adoption of this error is productive of the most serious consequences; for it would most likely produce in measles inflammation of the lungs, which, in truth, is commonly the result of carelessness upon this point.

The bed-room should be large and airy; free from currents of cold, but well ventilated, and not hot. The room, also, must be darkened, on account of the tenderness of the eyes; all noise excluded, and mental excitement or irritation carefully avoided.

Regimen. — Little or no food must be allowed, and whatever is taken must be of the simplest kind, and in a liquid form. Mild mucilaginous drinks, and *warm*, may be given liberally; as barley-water, or thin gruel, &c.

Sponging, &c. — The face, chest, arms, and hands should be sponged occasionally with vinegar and *warm* water (one fourth and three fourths). This will be productive of great comfort to the little patient; it removes the heat, dryness, and itching of the skin, which are often very distressing; and is especially useful at night in relieving wakefulness. If the cough be troublesome, it will be useful for the child to breathe the steam of warm water; not through an inhaler, but over a large basin, with the head covered with flannel large enough to hang over its edges. By this means the tender and inflamed eyes will at the same time derive advantage from the soothing effect of the vapour.

Cautions. — Whenever the measles is known to be prevalent in a neighbourhood, and a child manifests symptoms of cold in the head and fever, it should at once be a reason for carefulness on the part of the parent. The diet should be light, cooling, and scanty; and the child should be carefully kept in-doors.

It has been before remarked, that in its ordi-

nary course measles is a disease unaccompanied with danger, but that the mildest form may be speedily converted into the most dangerous. That is to say, a sudden change may take place in the symptoms, arising out of circumstances which could not have been foreseen, and therefore unavoidable; or may be produced by improper management on the part of the nurse, such as the giving of stimulants, by too much heat, or by exposure to cold. Now it is for the parent early to notice any change which may occur from the first source, and by her watchfulness to guard against the possibility of its arising from either of the second.

In reference to the first, if the child should complain at any period of the disease of severe headach, with piercing pain through the temples, and if this is accompanied by wandering of mind, great increase of suffusion of the eyes, as also intolerance of light, the immediate attention of the medical man is demanded. So, if towards *the close* of the eruption, that is, from the seventh to the ninth day, the breathing should *again* become hurried, (this symptom is very generally present during *the height* of the eruption, and is not necessarily connected with disease of the lungs,) with pain and oppression felt at the chest, the cough becoming hacking and incessant, &c. (all symptoms cognisable by the mother, and indicative of

inflammation of the lungs), no time must be lost in seeking medical aid.

With regard to the last cause (improper management), it may be well, in reference to it, to observe, that it sometimes happens that the rash comes out imperfectly, or, having appeared properly, suddenly retrocedes and disappears; and that under such circumstances the nurse will almost certainly, if not well watched, give the child "a good dose of sulphur in diluted spirit, or a glass of punch containing saffron," which are considered specifics for bringing out the eruption. Nothing can be more injurious than such remedies, for generally the disappearance of the rash will be dependent upon the existence of some internal inflammation, or of too high a fever; for the removal of which the medical man ought to be instantly applied to. Sometimes, however, it may be fairly traced to a careless exposure to cold; under such circumstances the child should be instantly, and without hesitation, put into the warm bath.

Measles are frequently followed by cough, and deranged bowels; and there is always great susceptibility about the child for some time. On this account he should be carefully screened from a cold or damp atmosphere; the diet should be carefully regulated, and flannel worn next to the skin. If the cough should continue, it must not be neglected on the supposition that it will wear

off; for it demands the skilful and careful attention of the medical man.

In conclusion, it may be remarked that very frequently during infancy and childhood, and particularly during the period of teething, eruptions very similar in appearance to this disease occur; unless, however, they are accompanied by the specific fever, and run the regular course, they may at once be decided upon as not being the measles.

SECT. VIII. — SMALL-POX.

This disease, the most dreaded of all eruptive fevers, is not so commonly met with in the present day as formerly; thanks to that Providence which led to the discovery of Jenner. But although its occurrence is not so frequent, it still does occasionally present itself; when it will assume either a mild or severe form. If it attack a child that has not previously been vaccinated, it is called natural small-pox; and the chances are that the disorder will be severe in character; — if, on the other hand, it occur in the vaccinated, the disease will generally be much modified in its symptoms; the attack will be mild, and without danger.

NATURAL SMALL-POX. — The infection of

small-pox having been received into the system of a child that has not been vaccinated, fourteen days (on an average) will transpire before the commencement of the febrile symptoms, or eruptive fever. A distinct rigor or shivering fit then takes place, accompanied by pain in the back or in the stomach, with sickness, giddiness, or headach; as also great drowsiness. And if an infant be the subject of the disease, a convulsive fit will sometimes take place, or several in succession.

At the end of eight-and-forty hours from the occurrence of the rigor (in the majority of cases), the eruption comes out; and shows itself first on the face and neck in minute flea-bite spots. In the course of the next four-and-twenty hours in some cases, and in others not until the expiration of two or three days, it completely covers the body; not being confined exclusively to the skin, but frequently extending to the mouth and throat, and even to the external membrane of the eye.

In the course of two or three days from their first appearance the little pimples, increasing in size, will be found to contain a thin transparent fluid, to pit or become depressed in their centre, and the skin in the spaces between them will be found red. On the seventh or eighth day from the commencement of the fever, the fluid con-

tained in the pimples will be no longer transparent, but opaque; and they will consequently appear white, or of a light straw colour. Each pimple or pock will be no longer depressed in its centre, but will become raised and pointed, being more fully distended by the increased quantity of fluid within; and the skin around each pock will now be of a bright crimson. The head, face, hands, and wherever else the eruption shows itself, gradually swell; and the eye-lids are often so much distended as to close the eyes and produce temporary blindness. There will always at this time be some degree of fever present, and its amount will vary with the circumstances of each individual case. The skin, too, will be very tender, so much so sometimes as greatly to harass and distress the child.

On the eleventh day the swelling and inflammation of the skin of the body and face subside; the pimples upon these parts dry up and form scabs, which fall off about the fourteenth or fifteenth day. Those on the hands, as they come out later, commonly continue a short time longer. The eruption leaves behind, in some cases, the peculiar marks of the disease; and in others merely discoloured spots, which disappear in the progress of a short time.

The natural small-pox is sometimes much more severe in its character than the foregoing, and

what is called *confluent* small-pox is said to exist. This form will be marked by great constitutional disturbance, and the eruption coming out earlier than in the milder form; instead of being distinct, that is, each pimple standing distinct and separate one from the other, they will coalesce, and appear flat and doughy, not prominent; they will more particularly run into each other on the face, where they will form one continuous bag, which soon becoming a sore, will discharge copiously.

SMALL-POX IN THE VACCINATED. — When small-pox occurs to those that have been formerly vaccinated, the disease, in almost every instance, is much altered or modified in its character. Indeed in children, in whom of course vaccination has been but comparatively lately performed, small-pox when it occurs will, in the majority of cases, be so mild that the real nature of the disease will be with difficulty determined: so mild, that again and again has a parent been heard to exclaim, "Surely these few scattered pimples cannot be the small-pox!" If, however, as the pimples progress, they are narrowly watched, and are seen to become depressed in their centre; if there has been the precursory rigor, &c.; and if the source of the disorder can be traced to some case of undoubted small-pox,

the child in fact having been exposed to contagion, no doubt ought to exist in reference to the nature of such a case, however slight may be the character of the disease.

The usual progress, however, of small-pox modified by vaccination is as follows. The first stage is the same usually as in the natural form of the disease. As soon, however, as the eruption appears, the modifying power of the vaccination becomes apparent. The eruption will be found to be generally both less in quantity and more limited in its extent; or if even it should come out profusely, and cover a large extent of the surface of the body, still the controlling power of the vaccination will immediately show itself after its appearance — first, in the complete subsidence of all the febrile symptoms which will now take place; and, secondly, in reference to the eruption, part of which will die away at once, and the remainder will by the fifth day be filled with the opaque yellowish fluid, then dry up, becoming hard and horny, and falling off will leave a mottled red appearance of the skin, and now and then slight pitting.

Such is the usual progress of the disease: subsequent to vaccination, it is a mild and tractable disorder. It is right, however, to mention that small-pox has occurred even to the vaccinated in almost as severe a form as the confluent natural

small-pox, and running its regular course unaltered or unmodified. Such instances, however, are extremely rare, and form the exceptions to the general rule; for "no reasonable doubt can be entertained, from the abundance of facts now before the world, that such modification is the *law* of the animal economy, and that the regular or natural progress is the *exception*."

MATERNAL MANAGEMENT.—The grand principle in the treatment of small-pox is to moderate and keep under the fever; and however the plans adopted by different medical men may vary in particular points to accomplish this purpose, they uniformly make this principle their chief aim and object. To carry out this intention, however, the medical adviser is greatly dependent upon the aid and assistance of a judicious parent, and without this it is impossible to hope for a successful issue to the case. A clear knowledge, therefore, of those points of general management in which in fact a great part of the above principle consists (few and simple as these directions are), it must be all important for the mother to be acquainted with: for the rest, she must and ought to look to the medical man.

In the more rare and severe form of this disease, viz. the confluent small-pox, although in some instances it runs the same course as the

be converted into one of the most severe and dangerous. Facts have abundantly shown that such measures invariably prove the most effectual means of exasperating the disease, and endangering life.

Regimen. — This must be most sparing. Cold water may be given whenever the child asks for it. Lemonade should form the common drink during the fever; and gruel, barley-water, and roasted apples are all else that is required during this period, and not until the disease is going off must any change be made in the diet.

The above period having arrived, mildly nutritious food should be given, as chicken or mutton broth, beef-tea, arrow-root, tapioca, or sago; to be followed in a few days by the wing of a chicken or a mutton chop; remembering always, that solid animal food must at first be given cautiously and sparingly. Wine or stimulants must be positively forbidden; unless, indeed, ordered by the medical man, for circumstances may arise which render them advisable.

The state of the bowels must be carefully attended to at this time.

The eruption. — In the natural and mild form of this disorder the pustules generally break from the sixth to the eighth day; dry scabs succeed; and in about nine or ten days the parts heal per-

fectly, requiring no treatment. In the more aggravated cases, however, in which the pustules are very numerous, running one into the other, and, bursting, discharge greatly, the whole surface of the body should be frequently and liberally dusted over with dried flour, or, what is better, starch powder. The sores in this instance are always tedious in healing, and followed by the well-known pits or marks; these arise from a loss of substance in the true skin, and occur more particularly on the face, from the great vascularity of this part causing the pustules to be more numerous here than elsewhere. It is a popular error to suppose that by wearing masks of fine linen or cambric illined with particular ointments, these scars or pits may be prevented: it is impossible to prevent them; and any local application, except a little cold cream or oil of almonds applied to the scabs when they harden, will prove more injurious than useful. The child's hands, however, should always be muffled to prevent its scratching or breaking the sores, for otherwise he will not be kept from thus attempting to allay the excessive itching which they occasion.

The hair should be closely cut at an early period of the disease, and so kept throughout its continuance. This will contribute very much to the comfort of the child, by preventing the hair becoming matted together with the discharge from

the pustules when they break, which gives rise to great pain and irritation. In the confluent and worst forms of this disease, this measure it is particularly necessary to attend to, as also to the application of cold lotions to the head when hot and dry (with other remedial means), as there is always a tendency in these cases to the formation of abscesses, the healing of which is troublesome and attended with difficulty.

Cautions, &c. — It has already been stated that a *free ventilation* of the bed-room is necessary to the well-doing of the patient. This measure, however, must not be confined to the chamber of the sick, but acted upon through the whole house.

In conjunction with ventilation *fumigations* by means of aromatic substances kept slowly burning should be resorted to. A solution of the chloride of lime, too, a most powerful disinfectant, should be used to purify the different apartments. This is best accomplished by steeping in the solution pieces of linen, and hanging them about the rooms, as also frequently and freely sprinkling the walls themselves; and as soon as the invalid is removed, the chamber should be white-washed, the various articles of furniture well scoured with soap and water, and the room be well and freely ventilated prior to its being again occupied.

The clothes of the patient and the bed linen

should be frequently removed, and when taken away immediately immersed in boiling water, and whilst hung up in the open air sprinkled occasionally with a weak solution of the chloride of lime. If these directions are not observed, and the clothes are closely wrapped up, they will retain and give out the disease to others at a great distance of time.

Again: as the contagious property of small-pox hangs about the child as long as any scabs remain (which indeed may be said to retain the poison in its concentrated form), a parent must be most careful that the invalid is not too early brought in contact with the healthy members of the family.

An observance of these precautions is imperatively demanded; they not only protect the healthy, but aid the infected.

SECT. IX. — HOOPING-COUGH.

My chief inducement to notice the above disorder arises out of the well-known fact, that there is no complaint of childhood more frequently subjected to quackery and mismanagement than is this. Indeed, there are few maladies against which a greater array and variety of means have been recommended, than against hooping-cough.

I suppose from the circumstance of the simple and mild form of the complaint being so tractable (provided it remain such) that the simplest and mildest measures effect its cure, parents are tempted to undertake its management in the more severe and complicated forms; and the result is but too often the establishment of disease dangerous to life, and sometimes fatal to it.

But although most imprudent for a parent to assume the office of the physician, her aid is essentially necessary in carrying out the measures prescribed. By her watchfulness and care the duration of the disease may not only be abridged, but, what is of much greater importance, a more serious and aggravated form of disease prevented; for although hooping-cough in itself is not a dangerous disorder, still the most simple and slight case, if neglected or mismanaged, may quickly be converted into one both complicated and dangerous.

Description of the disease. — Hooping-cough commences with the symptoms of a common cold, which is more or less frequent. These symptoms continue from five days to fifteen; at the end of which time the cough changes its character, and assumes the convulsive form which distinguishes the disorder. It occurs in paroxysms, varying with the severity of the disease from five to six

in the twenty-four hours to one every ten or fifteen minutes; being generally more severe and frequent during the night than in the day.

During a paroxysm the expirations are made with such violence, and repeated in such quick succession, that the child cannot breathe, and seems in danger of suffocation. The face and neck become swollen and purple from suffusion; and the eyes prominent, injected, and full of tears. The little one, with a forewarning of the attack, which it dreads, falls on his knees, or clings closely to any thing near him. The paroxysm terminates with one or two long inspirations, attended with that peculiar noise, or "whoop," from which the disease has derived its designation.

Sometimes the fit of coughing is interrupted for a minute or two, so that a little rest is obtained; and is then succeeded by another fit of coughing and another hoop, until after a succession of these actions the paroxysm terminates by vomiting, or a discharge of mucus from the lungs, or both.

The disease having continued at its height for two or three weeks, it begins naturally to decline; the paroxysms become less frequent and violent; the expectoration increases; the cough loses its characteristic hoop, and gradually wears away altogether; until at length, in two or three months from the first onset of the disease, the

child is restored to perfect health. Sometimes, however, particularly in the autumn, and at other seasons on the occurrence of easterly winds, the paroxysms of cough will return,—it will assume its spasmodic character, and be accompanied with the "whoop," after a month, or even two or three months, of apparent perfect recovery. Errors in diet will sometimes alone have a similar effect.

It is a disease which usually occurs during childhood, rarely affects the same individual twice, and is seldom seen in the very young infant.

In reference to the probable result of the disease, when it occurs in its mild and simple form in a healthy child, the termination is usually favourable: but it may at first assume this form, and afterwards become complicated, and consequently more or less dangerous, owing to injudicious management, or to various influences over which the mother has no control.

It generally appears as an epidemic, and at those seasons when catarrhal complaints are most prevalent, and affects many or several at the same time. Isolated cases, however, frequently occur, which seem to prove the disease to be infectious. Some persons deny that it is so. Mothers and nurses, however, who have not had the disease, will often contract it from the child under such circumstances, and thus it will be quickly propagated through the family. The nursing mother

will occasionally take it from the infant at her breast. The child who has caught it from others whilst at school, and brought home in consequence, will communicate it readily to his brothers and sisters, although the disease did not exist previously in the family or neighbourhood, and was brought from a distant part of the country. All these instances are surely proofs of its infectious character, and point out the necessity of caution whenever hooping-cough may present itself in a family, and the necessity which exists for an early removal of the unaffected children from the sphere of its contagious influence. The infectious property diminishes as the disease declines.

MATERNAL MANAGEMENT.—In the mild and simple form of this disease the medical treatment is one rather of prevention than cure, and the maternal management consists in assisting, by watchfulness and care, the fulfilment of this design.

In these slighter cases little more is required of the mother during *the first stage* of the disorder (that is, before the cough becomes spasmodic) than attention to diet, regimen, and the excretions. The diet should be farinaceous, with milk, or as may be otherwise directed. The child must be confined to a mild equable tem-

perature; in fact, to his apartment. It is a popular error to suppose that at this time change of air is beneficial to the disease: at a later period it certainly is so, but now injurious, and attended with great risk. Should the weather be cold, the little patient must be warmly clad, and flannel worn next the skin; this latter precaution should always be taken in the winter, spring, and autumn. Purgatives and other medicines will be required, and ordered by the medical attendant; the chief attention, however, of the parent must be directed to any change she may observe in the symptoms, breathing, &c.; she must be all on the alert to notice the first signs of local inflammation. Of this, however, we shall speak presently.

During the early part of *the second stage*, that is, when the cough becomes spasmodic, assuming its peculiar sound, the same diet and regimen must be continued, and the same watchfulness observed, lest any inflammatory symptoms manifest themselves.

Under the foregoing treatment the disease generally runs its course without any untoward event, and the child recovers perfectly. Sometimes, however, although the patient is quite well, and the disease on the decline, the cough still continues. In these cases, and at this time, it is that change of air often proves so very

serviceable. The sea-side is preferable, if the season of the year permit; and salt-water bathing, commencing with the warm or tepid bath, and passing gradually to the cold-bath (if no complication forbid it), will also prove certainly and rapidly remedial.

Crying, mental irritation, or opposition, frequently bring on a fit; and even the sight of another in a paroxysm will induce it in those affected by the disease. Running or other active exercise will generally cause the fits to be more severe. Young children, too, must be carefully watched at night, and be raised up by the nurse as soon as the fit is threatened. These hints the mother should bear in mind.

So much for the simple form of the disease, and that in which it most frequently and commonly presents itself to our notice: a mild disease; and, if carefully managed and watched over, certainly not a dangerous one.

Of what, then, is a parent to be afraid, or against what is she to guard? Lest other disease insidiously come on, and advance to an irremediable degree, masked by the cough, without attracting her attention. This is the great source of danger in hooping-cough. The physician, in a case of simple hooping-cough, is not in daily attendance upon his patient, and therefore not present to notice the commencement

or first symptoms of those diseases which so frequently occur at this time, and the successful treatment of which will mainly depend upon their early detection, and the decision with which they are treated. When you hear of a child or several children in a family dying of hooping-cough, it is not this disease which proves fatal; but death is caused by some disease of lungs or brain, which has been superadded to the hooping-cough. The progress of hooping-cough, then, must be closely attended to by the parent, even in the most favourable cases.

The most frequent complication with hooping-cough is *inflammation of the air-tubes* of the lungs. This is extremely frequent during spring and winter, especially in the months of February, March, and April, owing to the prevalence of easterly winds at this season. It is not my intention to detail the symptoms of this affection, only to point out those which will enable a parent to recognise its approach. A parent then may take warning, and fear the approach of mischief, when she observes the fits of coughing become more frequent and more distressing to the child, and the breathing hurried in the intervals of the paroxysm; when any exertion or speaking causes increased difficulty of breathing or panting; when the expectoration becomes less abundant, and difficult to get up; when there is no longer, or

at all events less frequent, vomiting after the cough, and more or less febrile symptoms present.

If *the lungs* themselves are attacked by inflammation, most of the symptoms already pointed out will occur; the cough will be frequent, in short paroxysms; the vomiting will not take place; the breathing will be very quick and hurried; and as the disease advances the hoop will cease.

If hooping-cough attack a child whilst teething, or from six months to two or three years of age, it is very common for the brain to suffer, and *convulsions* and *water on the head* to occur, particularly if the latter disease prevails in the family. Whenever the paroxysm of cough is increased in violence, the characteristic hoop disappearing, the face becoming very livid; the hands clenched, and the thumbs drawn into the palms; the head hot, and marked fits of drowsiness and languor; and the child, during sleep, screaming out, or grinding its teeth — something wrong about the head ought to be anticipated. Of the treatment we have here nothing to say, except that the gums must be carefully examined, and scarified if they require it, and the temperature of the head reduced by cold sponging, or the application of a bag of ice when necessary. The chief duty, however, of the parent is to be alive to these symptoms, and

early to detect the incipient mischief, that by a prompt application of efficient means the accession of so formidable a malady may be prevented.

To *specific remedies* for this disease it is scarcely necessary to allude, after what has been advanced, except by way of warning. In the simple form of the complaint such medicines are superfluous, or rather some of them, from their violent properties, most dangerous; in the complicated forms of the disease they are inadmissible.

The indiscriminate use of *purgatives*, also, a parent should avoid. Bowel affections are not an infrequent attendant upon hooping-cough, and always aggravate the primary disorder.

Of *external applications* all that need be said is this, that if they are not violently stimulating, they do no harm; if, however, they contain tartar emetic, in addition to their doing no good to the disease, they cause unnecessary suffering to the patient, and are sometimes productive of dangerous and even fatal sores.

SECT. X. — CROUP.

This disease is one of the most formidable of childhood; sudden (generally) in its attacks, most active in its progress, and if not met by a prompt

and decided treatment, fatal in its termination. Hence the paramount importance of parents being acquainted with the signs which indicate its approach, that medical aid may be secured at the very onset of the disease. Upon this early application of suitable remedies every thing depends.

SIGNS OF ITS APPROACH. — Croup may appear in one of two ways: either preceded for two or three days by the symptoms of a common cold, accompanied with hoarseness and a rough cough; or it may attack with the most alarming suddenness, during the night for instance, although the child had been merry and well the previous evening.

Hoarseness, however, is the premonitory and important symptom of croup; for although it is not every hoarseness that is followed by this formidable malady, still this symptom rarely attends a common cold in young children, and therefore always deserves when present the serious attention of the mother, particularly if accompanied by a rough cough.

The symptoms or signs of the approach of this disease have been ably and graphically depicted by the late Dr. Cheyne: this has been before referred to, but it will bear repetition.

"In the approach of an attack of croup, which

almost always takes place in the evening, probably of a day during which the child has been exposed to the weather, and often after catarrhal symptoms have existed for several days, he may be observed to be excited; in variable spirits; more ready than usual to laugh or to cry; a little flushed; occasionally coughing, the sound of the cough being rough, like that which attends the catarrhal stage of the measles. More generally, however, the patient has been for some time in bed and asleep before the nature of the disease with which he is threatened is apparent; then, perhaps without awaking, he gives a very unusual cough, well known to any one who has witnessed an attack of the croup: it rings as if the child had coughed through a brazen trumpet; it is truly a *tussis clangosa;* it penetrates the walls and floors of the apartment, and startles the experienced mother — 'Oh, I am afraid our child is taking the croup!' She runs to the nursery, finds her child sleeping softly, and hopes she may be mistaken. But remaining to tend him, before long the ringing cough, a single cough, is repeated again and again. The patient is roused, and then a new symptom is remarked: the sound of his voice is changed; puling, and as if the throat were swelled, it corresponds with the cough; the cough is succeeded by a sonorous inspiration, not unlike the kink in hooping-cough — a crowing noise, not so shrill,

but similar to the sound emitted by a chicken in the pip (which in some parts of Scotland is called the roup, hence probably the word croup); the breathing, hitherto inaudible and natural, now becomes audible, and a little slower than common, as if the breath were forced through a narrow tube; and this is more remarkable as the disease advances, &c. &c."

It is unnecessary for me to add to the foregoing picture.

MATERNAL MANAGEMENT. — Having early obtained medical assistance, attend with the strictest obedience to the directions given. And in this disease, more than any other, it is particularly important that the mother should give her personal superintendence; for the activity of the progress of the disease leaves no time to retrieve errors or atone for neglect. The practitioner may be prompt and decided in the measures he prescribes, but they will avail little, unless they are as promptly and decidedly acted upon.

The parent will have her reward; for, if timely aid has been afforded, and adequate means used, the event will be almost invariably favourable.

ITS PREVENTION. — Croup seldom occurs during the first year of infantile life; most fre-

quently in the second year, and between this and puberty (the fourteenth year), its attacks are occasionally to be apprehended. When it has once attacked a child, it is very liable to recur at any period before the thirteenth or fourteenth year of age. It may even do so several times, and after intervals of various duration. It is very desirable, therefore, that a parent should be acquainted with the means of prevention.

They consist simply in the following measures: —The careful protection of the child from cold or damp weather, particularly the north-east winds of spring following heavy rains. Croup is most prevalent in those seasons which are cold and moist, or when the alternations of temperature are sudden and remarkable. If the residence of the child is favourable to the production of croup, (for instance, near a large body of water, or in low damp spots,) he should, if possible, be removed to a healthier situation. Sponging or the shower-bath, with cold water and bay-salt, with considerable friction in drying the body, should be commenced in summer, and employed every morning upon the child's rising from bed. The clothing should be warm in the winter and spring, the neck always covered, and flannel worn next the skin throughout the year; but hot rooms, and much clothing when in bed, must be avoided. The diet must be light and nourishing; no beer

or stimulant given; and the state of the bowels must be carefully watched.

The above precautions are of course particularly necessary to enforce immediately after a recovery from an attack, for there is a great tendency to relapse. If the attack takes place during the winter or spring months, the invalid must be kept, until milder weather, in the house, and in a room of an equable and moderately warm temperature. If in the summer, change of air, as soon as it can be safely effected, will be found very useful.

Croup is not contagious; although like sore throat, and for the same reasons, it is found sometimes existing at the same time, or in quick succession, in more than one child of the same family.

SECT. XI.—WATER IN THE HEAD.

Water in the head is a formidable disease, and not unfrequent in its occurrence. It is often destructive to life, and the instances are numerous in which it has appeared again and again in the same family, carrying off one child after another, as they have successively arrived at the same age.

But notwithstanding its frequency and fearful character, a mother may do much to overcome

a constitutional predisposition to this disease, and thus prevent its appearance; as also she may assist greatly in promoting its cure, when it does occur. Hence it is most important that a mother should be acquainted with the measures of prevention; and also, when it does manifest itself, that clear and accurate information should be possessed, upon what may be said to constitute the maternal management of the disorder.

ITS PREVENTION.—Whenever there is found to exist in a family a predisposition to this malady, one or more children having suffered from it, a mother must make up her mind, and in the strictest sense of the word, to be the guardian of the health of any child she may subsequently give birth to. And not only during the period of infancy, but during that of childhood also, must she continue the same careful and vigilant superintendence.

The infant must be brought up on the breast; and if the mother is not of a decidedly healthy and robust constitution, she must obtain a wet-nurse possessing such qualifications. The breast milk, and nothing beside, must form the nutriment of the child for at least nine months; and if the infant is delicate or strumous, it will be prudent to continue it even six months longer. When the period arrives for the substitution of

artificial food, it must be carefully selected; it must be appropiate to the advancing age of the child; nutritious and unirritating. Good air and daily exercise, and the bath or sponging, are of much importance; in short, all those general measures which have a tendency to promote and maintain the tone and general health of the system, and thus induce a vigorous and healthy constitution, and to which reference has been so fully made in the second chapter of this work, must be strictly regarded and followed out by the parent.

The condition of the digestive organs must be the mother's especial care. Costiveness must be guarded against; and if at any time the secretions from the bowels indicate the presence of derangement, the medical attendant must be applied to, that appropiate remedies may without delay be exhibited. Their disordered condition is frequently productive of head-disease. Again and again have I clearly traced the origin of the complaint, of which I am now writing, as more immediately resulting from disorder of the digestive apparatus. To a child thus predisposed to water in the head, the healthy state of these organs is not only of first consequence, but any deviation from health to be dreaded, to be immediately attended to, and guarded against in future; and, as there is a great liability to these attacks at the time of weaning, the above remarks es-

pecially apply to that period, when due attention must be particularly paid to the plan of diet adopted.

During teething the mother must be especially watchful, for it is at this time that the disease so commonly appears; the irritation produced by this process being a frequent exciting cause. Every thing, therefore, that will tend to allay excitement of the system, must be strictly enforced, as well as all causes avoided, which would produce derangement of the stomach and bowels. The head should be kept cool. For this purpose it must be sponged night and morning throughout the whole period of teething; a horse-hair pillow used in the cot; and nothing but a light straw hat should be worn, except in winter. The diet should be moderate, and carefully regulated after leaving the breast, and the child should be as much as possible in the open air. The mouth must be occasionally examined, and if the gums become hot or distended, they must be scarified or lanced, as may be advised. If the parent finds at any time an unusual heat about the head, the medical man must be at once consulted; or if there is watchfulness or indisposition to sleep at the proper periods, or frequent startings in the sleep, irritability of temper, and much crying, danger should be apprehended, and prompt and judicious means employed.

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THE END.

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to the circumstance of ten children in one family having died of this disease; the eleventh, for whom this measure was employed, having been preserved.

Stimulants, throughout the whole period of infancy and childhood, and of every description, must be prohibited. Children nursed by drunken parents, and who have indulged in the use of spirituous liquors during suckling, are never healthy; are the frequent subjects of convulsions, and many of them die eventually of water in the head. The practice of administering spirits to the child itself—a habit, unfortunately, not very uncommon among the lower classes—produces a similar result. Narcotics may operate in a like manner: they derange the whole system when persevered in, particularly affecting the brain; promote disease; and sometimes give rise to the one in question. This remark should be borne in mind by the mother, as Godfrey's Cordial and other preparations of opium are too often kept in the nursery, and secretly given by unprincipled nurses to quiet a restless and sick child.

All causes of mental excitement should be carefully avoided, and particularly the too early or excessive exercise of the intellectual faculties. If the child be endowed with a precocious intellect, the parent must restrain rather than encourage its exercise. Nothing is more likely to light up this

disease in a constitution predisposed to it, than a premature exertion of the brain itself.

MATERNAL MANAGEMENT OF THE DISEASE. —The early detection of this disease is of great importance. The chances that the medical treatment will terminate successfully much depend upon the early and prompt application of remedial means. The reason why these cases have so often terminated fatally has arisen from the physician being consulted when irremediable mischief had already taken place. It would be difficult, however, to point out the signs of its approach in all its forms (for this disease does not always commence in the same way, sometimes with fever, &c.), still it most frequently occurs preceded by certain striking and well-marked symptoms; and whenever the following are noticed by the parent apprehensive of mischief, she should at once send for her medical adviser: — watchfulness, or starting from sleep with a cry of alarm; prolonged screaming without any obvious cause; moaning and drowsiness; rolling the head from side to side on the nurse's arm, or thrusting it back against the pillow; knitting the brows and aversion from light, with heat of head, and constant carrying the little hand up to it; half closing the eye-lids, and frequent vomiting.

The chief and principal point in the maternal

management (for it includes every other) is promptly and faithfully to administer the remedies prescribed by the medical attendant. A vigilant maternal superintendence is more necessary in this than almost any other disease; and it is highly desirable, therefore, that the mother should have a day and night nurse — individuals upon whom she can depend. A careful notice of symptoms and changes in the patient, in the intervals of the medical man's visits, and a true and faithful report to him upon his return, are of essential importance. A sleepy nurse will neglect the application of the most important remedies, and necessarily give an unfaithful report of symptoms; hours the most valuable to the child's well-doing are thus lost, and the chances of saving its life worse than problematical.

The temperature of the room should be kept rather cool than warm, and the bed-clothes only sufficient to preserve the natural heat of body. Strong light must be excluded. Great quiet should be observed. Freedom from all excitement of the senses, and irritation of the temper, should be carefully avoided: this is particularly necessary where the child is naturally of a quick and sensitive disposition.

All the excretions must be put aside for the inspection of the physician, but not kept in the sick chamber, which must be well aired, and perfectly

free from closeness. The regimen must be only such as is ordered, and any departure therefrom will be attended with mischievous consequences. During the early periods of the disease, all that is required are cooling diluents, given frequently, and in small quantities at a time; and upon approaching convalescence great carefulness must be paid to the amount of nourishment allowed, lest the disease be rekindled: strict compliance, therefore, to medical directions must be given.

A very useful, and indeed powerful remedy prescribed in this disease is sometimes rendered utterly useless from a want of a persevering and also proper mode of applying it, viz. cold applications to the head. It is to be effected either by means of cloths kept constantly wet with cold water, or evaporating lotions; or by means of a bladder containing pounded ice mixed with water. If the two former are employed they require frequent renewal, or they become dry, hot, and more injurious than useful; and whichever is used, it must be kept in constant contact with the forehead, temples, and upper part of the head. Here is another error; they are seldom used large enough, and only partially cover these parts. With the further view of keeping the head cool, and preventing the accumulation of heat, a flat horse-hair pillow should be employed, and the head and shoulders somewhat raised.

Perseverance in the measures prescribed, even when the case appears beyond all hope, must ever be the rule of conduct. Recovery, even in the most advanced periods of the disease, in cases apparently desperate, occasionally takes place. There is great reason to fear that many a child has been lost from a want of proper energy and perseverance on the part of the attendants in the sick room. They fancy the case is hopeless, and, to use their own expression, "they will not torment the child with medicine or remedies any longer."

"Whilst there is life, there is hope," is a sentiment which may with great truth be applied to all the diseases of infancy and childhood. Striking, indeed, are the recoveries which occasionally present themselves to the notice of medical men; and those individuals may with great justice be charged with unpardonable neglect who do not persevere in the employment of the remedies prescribed, even up to the last hours of the child's existence.

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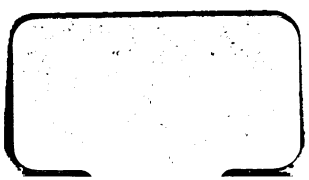
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